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A Case Study of Jemicy School to Determine Practices Conducive to Developing Creative Potential of Dyslexic Children.

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A Case Study of Jemicy School to Determine Practices Conducive to Developing Creative Potential of Dyslexic Children

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ABSTRACT

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by

Brenda S. Graves

Approximately 15% to 20% of Americans struggle with learning disabilities. The National Institutes of Health reported that 60% to 80% of those with learning disabilities have problems with reading and language skills (as cited in International Dyslexia Association, 2000). Dyslexia is a specific learning disability and according to Moats (2008), it is more common than any other kind of learning disability. Dyslexia varies in degrees of severity. About 4% of those diagnosed with dyslexia are severely dyslexic. This includes some 375,000 school children (Dyslexia Action, 2006). Although dyslexia certainly causes difficulties for children, many of them are bright and capable. Dyslexia also seems to be associated with many strengths and talents. Dyslexic children tend to be very creative thinkers, highly imaginative, and excellent in art, music, or drama (Marshall, 2004).

Unfortunately, unless a person is dyslexic it is difficult for anyone, including educators, to understand the struggles and hard work that encompass the day-to-day activities of a dyslexic person's life. The causes of dyslexia still remain a mystery and, therefore, educators and researchers may disagree on the best way to help the dyslexic student learn. Additionally, public educational institutions have been uninformed, ill equipped, and consequently ineffective in

dealing with the educational needs of the dyslexic child. The purpose of this study was to examine a school specializing in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child.

The findings revealed that the methods and practices used at the Jemicy School are conducive to developing the creative potential of dyslexic children. The study confirmed that using multisensory and experiential education does foster students' creativity. The school's unique environment along with the effective teaching methods used could and should be incorporated into other school systems. The exemplary education provided by the Jemicy School makes the school a viable benchmark for other schools to follow. The Jemicy School might be a model for educators to follow for helping dyslexic children learn in order to reach their fullest potential.

DEDICATION

I wish to dedicate this dissertation:

To the two people who have believed in me and have supported me through every educational endeavor since kindergarten--my parents. My mother, Katherine, validated my creative abilities and always encouraged me when school was difficult. My father, Dorsey, who went to be with the Lord shortly before the dissertation completion, was so proud of this accomplishment.

This work is also dedicated to my husband Dan and my son Christopher for being willing to listen to the dissertation over and over and putting up with me when I was ready to pull out my hair. My sister, Sheree, encouraged, motivated, and provided technical support throughout the entire process. All of you share this special time with me and will forever be a part of this accomplishment.

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CHAPTER 1

INTRODUCTION

"I remember I used to never be able to get along at school. I was always at the foot of the class…my father thought I was stupid, and I almost decided that I was a dunce" [Thomas Alva Edison, scientist, inventor, and dyslexic] (as cited in Donnelly, 2000, p. 13).

Imagine sitting in the classroom and feeling the way Thomas Edison described. The emotional consequence of such experiences can have destructive effects on an individual. Former vice president of the United States and governor of the state of New York, Nelson Rockefeller, recalled his feelings about growing up with dyslexia:

> I was dyslexic… and I still have a hard time reading today. I remember vividly the pain and mortification I felt as a boy of 8 when I was assigned to read a short passage of scripture at a community vesper service and did a thoroughly miserable job of it. I know what a dyslexic child goes through…the frustration of not being able to do what other children can do easily, the humiliation of being thought not too bright when such is not the case at all. (as cited in Audiblox 2000, 2006, p. 3)

Dyslexia occurs in all kinds of people regardless of intelligence, race, or social class. According to Dyslexia Action (2006), researchers have suggested that dyslexia runs in families; therefore, dyslexic adults are very likely to have children who are dyslexic. For many people, dyslexia is not identified until they are older. Charles Schwab, founder of one of the largest brokerage firms in America, did not realize he was dyslexic until his 8-year old son was diagnosed. It was at that point he began to understand his own difficulties with reading and spelling (as cited in Donnelly, 2000). In addition, the 1960s popular singer Cher did not realize she was dyslexic until her daughter Chastity was diagnosed. According to Donnelly, when she was in school, her family and teachers thought she was lazy and was not trying very hard. She knew that she was working hard and her frustration led to a discipline problem that eventually led to her dropping out of school at age 16. The Society for Neuroscience (2004) pointed out

that youth with untreated dyslexia are more likely than their nondyslexic peers are to drop out of high school and become unemployed, underemployed, or incarcerated.

Many social and emotional problems directly relate to dyslexia. Barbara Bush, former first lady and the parent of a child with dyslexia, noted that learning disabilities can destroy lives (as cited in Audiblox 2000, 2006). Ryan (2004) stated that dyslexia obviously affects self-image because dyslexic people frequently feel "dumb and less capable than they really are" (p. 1). These feelings of inadequacy begin to develop in students when reading instruction does not match their learning style. Over the years, the frustration builds and centers on their ability to meet the expectations of others; this is only surpassed by their inability to achieve their own goals. According to Ryan:

> The development of perfectionist expectations, to deal with anxiety, often stems from this frustration because dyslexic children grow up believing that it is 'terrible to make a mistake,' yet the nature of dyslexia will cause them to make careless and stupid mistakes which makes them feel chronically inadequate. (p. 1)

Although dyslexia certainly causes difficulties for children, many of them are bright and capable. According to Marshall (2004), dyslexia also seems to be associated with many strengths and talents. Dyslexic children tend to be creative thinkers; they are also highly imaginative and frequently excel in art, music, or drama. They are often good problem solvers with a knack for thinking outside the box. Adult dyslexics usually do well in careers like engineering, design, and architecture (Marshall). According to Shaywitz (2003), dyslexics appear to be excessively represented in the upper echelons of creativity. They include people in all career fields who have broken through a boundary to make a real difference in society.

Unfortunately, some people with dyslexia do not have stories of success. The question that needs to be asked is why? Why do some succeed when others do not? Although many factors could be associated with the reasons for success or failure, the educational environment

including the interventions used to assist dyslexics with their reading and language difficulties play a major role in the success or failure of the dyslexic child. Traditional classrooms have failed children who are nonreaders and untraditional learners. Smith (2005), founder of The Lab School of Washington, posed the question, "How can some children feel smart outside of school and stupid in the classroom?" (p. 6). She also stated that the nonreaders, poor spellers, and those having difficulty with written language often felt like failures in traditional classrooms. Ironically, many unsuccessful students at schools are actually excellent thinkers; they simply think differently (Smith, 2005). Unfortunately for the dyslexic child, having a different learning style (different from traditional teaching) can cause much social anxiety. The longer the dyslexia goes undiagnosed, the higher the level of social anxiety can become (Donnelly, 2000). Being different can make children feel as if they do not fit in. The main reason that they do not fit in is because the deck is stacked against them because of the way traditional schools teach. The playing field needs to be leveled so that all children can achieve success (Freed & Parsons, 1997).

According to a documentary entitled "Creative Brains Gifted, Talented and Dyslexic" by Rothschild and Carlson (2005), scientists have known for over a century that there are two sides to dyslexia. One side has been well researched and well known, whereas the other side, the creative side, although widely accepted, has been less researched. In recent years, there has been an increase in both interest and research on the positive aspects of having dyslexia. In their book *The Gift of Dyslexia,* Davis and Braun (1997) stated that learning disability was only one facet of dyslexia. According to the authors, the dyslexic different learning style should be considered a talent because the disability that created the confusing symbolic information has been proven to be an asset in other ways. Individuals with dyslexia are very talented at tasks that require the

ability to visualize something in a different or creative way (Davis & Braun). Shaywitz (2003) has championed the idea that the reading and spelling difficulties at the heart of dyslexia often occurred in tandem with ingenious, imaginative, "out-of-the-box" thinking that dyslexic individuals can draw on to excel in educational and economic systems dominated by the printed word. At the newly formed Yale Center for Dyslexia and Creativity, Shaywitz and her colleagues are devising experiments and using brain-imaging techniques to explore these ideas scientifically (Yale School of Medicine, 2008).

The Jemicy School empowers students with dyslexia or language-based learning differences to realize their intellectual and social potential through a proven multisensory curriculum. The school provides individualized instruction to students in grades 1 through 12 with an emphasis on the learners' unique talents. Jemicy is a regional and national leader in the education of dyslexic students. The instructional approaches of the school emphasize multisensory, hands-on experimental learning using the arts to teach academic skills (Jemicy School, 2008).

Statement of the Problem

Unfortunately, unless one is dyslexic, it is difficult for anyone, including educators, to understand the struggles and hard work that encompass the day-to-day activities of a dyslexic person's life. The causes of dyslexia still remain a mystery; therefore, educators and researchers disagree about the best ways to help dyslexic students learn. Additionally, public educational institutions have been uninformed, ill equipped, and consequently ineffective in dealing with the educational needs of the dyslexic child. West (1997) suggested that there might be an association between dyslexia and creativity. As a result, specialized schools that use a

multisensory approach to enhance the creative potential of the dyslexic child have emerged. The purpose of this study was to examine a school specializing in teaching children with dyslexia for the purpose of determining what methods and practices were being used that were conducive to developing the creative potential of the dyslexic child.

Research Questions

The following research questions were addressed in this study:

1. What specific teaching strategies and methods are used at Jemicy School to foster creativity among dyslexic children?
2. How are the innovative and nontraditional teaching methods used by Jemicy School developed?
3. Specifically, how does Jemicy School incorporate the arts into the academic skills used to teach dyslexic students?
4. What are the perceptions about the school's learning environment from administrators, teachers, and parents?

Significance of the Study

Approximately 15% to 20% of Americans struggle with learning disabilities. The National Institutes of Health reported that 60% to 80% of those with learning disabilities have problems with reading and language skills (International Dyslexia Association, 2000). Dyslexia is a specific learning disability and according to Moats (2008), it is more common than any other kind of learning disability. Dyslexia varies in degrees of severity. About 4% of those diagnosed

with dyslexia are severely dyslexic. This includes some 375,000 school children (Dyslexia Action, 2006).

Audiblox 2000 (2006) reported a study in Los Angeles County that revealed over 50% of suicide victims under age 15 were previously diagnosed as having had learning disabilities. Because the actual percentage of students diagnosed with learning disabilities in most school districts in the United States is below 5%, it appears that students with learning disabilities comprise a disproportionately large percentage of adolescent suicides. According to Audiblox 2000, researchers in Ontario, Canada analyzed suicide notes written by adolescents for spelling and handwriting errors; of the 27 available notes, it was found that 89% had significant deficits in spelling and handwriting similar to those of adolescents with learning disabilities. The Canadian findings could have substantial impact upon dyslexic students, adult learners, educators, researchers, educational administrators, and policy makers in better understanding the world that dyslexics find they must learn in and perhaps provide new knowledge as to how to address their educational needs earlier.

This study focused on the elements of a school that specializes in the teaching of dyslexic children using a multisensory approach therefore fostering their creativity. The findings of the case study might be used to identify effective techniques that could be incorporated into other school systems. The Jemicy School was examined with the possibility of becoming a benchmark to highlight best practices for other schools both public and private to follow. This could provide educators with a road map for helping dyslexic children learn. The outcome could mean more educational and career-related opportunities for dyslexic children through college and beyond.

Scope of the Study

I conducted a qualitative case study to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. I collected data by observing teachers and students in action, through personal interviews of administrators, teachers, and parents, and an analysis of school records.

Statement of Researcher's Perspective

I am an individual who experiences dyslexia on a personal level. Having spent 12 years in a public education system that did not understand the way a dyslexic child learns, I can relate to the struggles the dyslexic child faces on a daily basis. I understand a dyslexic child's frustration with not understanding why some things are so difficult. I have also had the experience of being creative yet not having that creativity valuated as an educational asset.

Additionally I work as a professional educator who routinely sees dyslexic children struggle in traditional educational systems. As a teacher, I deal daily with children who fall behind academically because the system exacerbates an already frustrating educational experience for the dyslexic child by not fostering his or her creative strengths.

I am passionate about the issues of dyslexia. In order to focus objectively on the study, I needed to set aside my lived experiences with dyslexia so they did not overshadow the case study experience. This was accomplished using the process of bracketing. "Bracketing is the act of suspending one's various beliefs in the reality of the natural world in order to study the essential structures of the world" (Van Manen, 1990, p. 175). By bracketing my lived experiences with dyslexia in a personal narrative (See Appendix S), I was able to focus more objectively on the

study. This also helped to denote any possible biases or preconceptions that I have. The personal narrative also allowed me to explicate why I chose to conduct the study.

The Setting

Jemicy School

In 1972, Joyce Bilgrave and David Malin created a camp to serve the needs of children experiencing difficulty in the traditional classroom because of dyslexia and other language-based learning differences. They named the camp "Bombadil" from a J.R.R. Tolkien character who likes to sing nonsense words, expressing the playful and creative nature of the founders. Although the camp was fun, its primary function was to provide tutoring in reading. The camp was a great success and the students were excited about school after attending the camp. Camp participants' parents were so elated with their children's success, they encouraged the camp's founders to open a school (Jemicy School, 2008).

In 1973, with the help of educator Margaret Rawson and psychologist Roger Saunders, both internationally recognized pioneers in the field of dyslexia, the Jemicy School officially opened with 51 students and 16 faculty members. Jemicy is one of the country's oldest day schools specializing in education for children with language-based learning differences. Two years later, the school moved to its current Lower and Middle School Campus. Jemicy School is located in the greater Baltimore area. The Lower School is situated in a rural setting in Owings Mills, Maryland (Jemicy School, 2008).

Today, Jemicy includes three divisions and has 280 students on two campuses and serves students in grades 1-12. The Lower School has an enrollment of 80 students and the Middle and Upper Schools each have 100 students enrolled. The 83 faculty members at Jemicy make the

student to teacher ratio 4 to 1. The classes are small, ranging from 2 to 12 students. The curriculum at Jemicy is highly individualized yet structured and challenging. The curriculum at the school includes all divisions of the arts such as dance, drama, visual arts, and music. Creativity and innovation are emphasized creating a love of learning in the students thus allowing them to achieve their full academic potential. The students learn to understand and appreciate their unique learning styles and become effectively self-advocates. More than 90% of Jemicy School students go to college (Jemicy School, 2008).

The Jemicy Professional Outreach Center serves as a resource for parents, teachers, and students throughout the region. The outreach program provides training programs to public, independent, and parochial school teachers and tutoring services to children and adults (Jemicy School, 2008).

The Jemicy School is a recognized leader in education for college-bound students who struggle with the mechanics of language: reading, written expression, spelling, and organization. Jemicy School and the Jemicy Professional Outreach Center are accredited by the Maryland State Department of Education, the National Association of Independent Schools, and the Association of Independent Maryland Schools. It is a member of the Council for the Advancement and Support of Education, the International Dyslexia Association, and the National Association of College Admission Counseling (Jemicy School, 2008).

The philosophy of the school is the belief that a school should be designed for its students, their present happy growth, and their soundly-based future effectiveness. A school is established as a group in which people are taught or led to learn, but it is as individuals that they learn through experiencing group life and developing personal competencies and understanding of their world (Jemicy School, 2008).

The major interest of the school is in meeting each student's specific needs and the fostering of his or her strengths and unique talents. Creativity, creative thinking, and problem solving are fostered at the school. Intellectual curiosity, skill-based learning, and creative flexibility are the objectives to which Jemicy School is dedicated. Each year, Jemicy enrolls a number of new students based on his or her learning style, academic needs, interests, and abilities. They seek bright, engaged, hard-working students who demonstrate strong innate comprehension yet struggle with language mechanics. They seek students who will benefit from their programs and contribute to the life of the school (Jemicy School, 2008).

Jemicy School (2008) provided the mission statement and credo of the school:

> *Mission Statement*: The Jemicy School empowers students with dyslexia/language-based learning differences to realize their intellectual and social potential through proven, multisensory curriculum.
>
> *Credo*: Jemicy School is committed to fostering mutual respect among students, parents, faculty and staff. We expect all to be partners in establishing and maintaining an atmosphere in which every individual is valued and respected. To this end, we ask that all members of the Jemicy community:
>
> - show respect to self and others in the school community,
> - contribute to the learning process,
> - demonstrate academic integrity, and
> - demonstrate responsibility for the appearance of the campus. (n. p.)

The Jemicy School has an annual operating budget of $8.2 million. Tuition funds are the primary source for the operating budget. Tuition for the 2008-2009 year was $27,750. The Annual Fund Gifts bridge the gap between the cost of tuition and the actual cost of educating a Jemicy student. Each year, over $500,000 in Annual Fund Gifts from parents, alumni, grandparents, faculty, and friends contribute to the operating budget (Jemicy School, 2008).

Because the Jemicy School is dedicated to the health, well-being, and education of children with language-based learning differences, it is eligible to receive United Way of Central

Maryland funds. Many businesses and corporations throughout the Baltimore community donate generously to the school. Some companies in the Baltimore area also offer matching gift programs for contributions to the school (Jemicy School, 2008).

The school has an endowment of $11 million that provides unrestricted and restricted funds for ongoing operational support, financial aid, professional outreach, and teaching resources. The 2008-2009 school year financial aid was $630,000. The endowment funds include permanently named funds in honor or in memory of a Jemicy student's parent or grandparent, alumnus, student, teacher, or friend (Jemicy School, 2008).

Definitions of Terms

The following definitions and terms are used in the study:

1. *Dyslexia:* The International Dyslexia Association (2009) has adopted the following new research definition of dyslexia; Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge (n. p.). Adopted by both the IDA Board, November 2002 and the National Institutes of Health, 2002.
2. *Learning Disabilities:* According to Bender (2004), the National Joint Council on Learning Disabilities provided the definition of a learning disability as being a general term that refers to a heterogeneous group of disorders manifested by

significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction and may occur across the life span. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance) or with extrinsic influences (such as cultural differences or insufficient or inappropriate instruction), they are not the result of those conditions or influences (p. 24).

3. *Comorbidity:* This refers to the coexistence of two (or more) different disabilities in the same child (Bender).
4. *Innovative creativity:* Bast (2004) defined innovative creativity as creativity where people detach the problem from its cocoon of accepted thought, to "step out of the box" or paradigm, to redefine a problem, produce many ideas, break through what the organization perceives as given and restraints, or provide solutions aimed at doing things differently (p. 1).
5. *Left-Brained:* This term describes people falling to the extreme left side of the left-right brain continuum. They are highly logical and analytical and solve problems that involve sequential logic. They are part-to-whole learners (Freed & Parsons, 1997).
6. *Right-brained:* This term describes people falling to the extreme right side of the left-right brain continuum. Their processing is less sequential and they are holistic whole-

to-part learners. They are spatial and three-dimensional in thinking and natural problem solvers (Freed & Parsons).

7. *Bracketing:* This is the act of suspending one's various beliefs in the reality of the natural world in order to study the essential structures of the world (Van Manen, 1990, p. 175).
8. *Dyspraxia:* This is defined as having difficulty with thinking out, planning, and carrying out sensor-motor tasks (Marshall, 2004).
9. *Dysgraphia:* This is defined as having difficulty with writing (Marshall).
10. *Dsycalculia:* This is defined as having a learning disability with math (Marshall).
11. *Attention Deficit Disorder (ADD):* This is a neurological syndrome that has three primary characteristics: inattention distractibility, impulsivity, and disinhibition (Bender).
12. *Attention Deficit Hyperactivity Disorder (ADHD:)* ADHD is a neurological syndrome that has three primary characteristics: inattention (distractibility), impulsivity, and disinhibition, with hyperactivity (Bender).

Overview of the Study

The case study was organized and presented in five chapters. Chapter 1 included an introduction to the study, research questions, and the scope of the study. Chapter 1 also contained a statement of the researcher's perspective, information pertaining to the Jemicy School, and definitions of terms used in the study.

Chapter 2 presents a review of literature related to the issues addressed in the study. Chapter 3 describes the research methodology and design. It includes a description of the

methods used to gather data and procedures used in the study. It also provides information about the population in the study and describes the process of data collection. The analysis of the data is presented in Chapter 4. Chapter 5 includes discussion and recommendations for practice and further consideration.

CHAPTER 2

REVIEW OF LITERATURE

Chapter 2 presents a review of literature related to the issues being addressed in this study. First, the history of dyslexia is presented as well as information relating to environmental, genetic, and neurological causes of dyslexia. Research associated with comorbidity is presented as well. In addition, information related to the definition of creativity, traits of the creative personality, and dyslexia and creativity are explored. Finally, educational perspectives associated with dyslexia are reviewed. Specifically, educational obstacles within traditional schools including lack of alternative teaching methods are identified.

Dyslexia: Historical Perspective

Dyslexia began as a rather ambiguous concept when first introduced in the writings of medical doctors attempting to understand why some individuals had difficulty reading. As reported by Guardiola (2001), the first of four distinct stages dealing with the history of dyslexia was introduced in 1884 by a German ophthalmologist, Rudolph Berlin. The term dyslexia refers to the Greek word *dys* or difficult and *lexis* meaning word. Dyslexia, therefore, was used to describe a specific disturbance of reading in the absence of pathological conditions in the visual organs (Audiblox 2000, 2006). According to Guardiola, Berlin published the results of a study conducted in 1887 with six patients suffering from brain lesions who were confronted with "word blindness," all having lost the ability to read because of the left-sided cerebral lesions; yet, the patients retained oral communication skills. As pointed out by Shaywitz (2003), Berlin

understood dyslexia as part of a larger family of language disorders called aphasia in which there is difficulty in either understanding or producing spoken language, or both.

Guardiola (2001) stated that it was not until the late 1890s that developmental dyslexia came to be understood as a separate and unique syndrome from that of acquired dyslexia. This effectively began the second phase of dyslexic research leading to a deeper analysis of the causes and characteristics of this condition. According to Guardiola, Hinshelwood wrote about a highly educated 58-year-old man who, in 1895, had suddenly lost the ability to read. This finding of word blindness and visual memory was published in *The Lancet*, a prestigious medical journal. This article inspired Pringle Morgan, a general practitioner from Seaford, Scotland, to publish an article on congenital word blindness in the British Medical Journal in 1896. The article described a case of an intelligent 14-year-old boy who could not learn how to read. According to Guardiola, Morgan has since come to be recognized as the father of developmental dyslexia. Morgan's article spawned the beginning of an increase in the identification of dyslexics throughout Europe and Argentina within the first decade of the 1900s (Guardiola).

Guardiola (2001) wrote that in 1917, Hinshelwood published more findings on dyslexia through a summation of the current knowledge in the field. Hinshelwood contended that there was a congenital component to dyslexia that involved a defect in the acquisition and storage of the visual memories of letters and words. Furthermore, Hinshelwood concluded that dyslexia had a genetic component, was more common in boys, and was remediable (Guardiola). In addition, Hinshelwood's research demonstrated that significant reading difficulties could exist in children with average and even above-average intellectual abilities (West, 1997). Further studies would seek to determine biological causes for the condition. Hinshelwood's research and publications contributed to heightened clinical and social awareness to the phenomenon of

dyslexia. Even though he was a neurologist, Hinshelwood would extend his commitment to addressing dyslexia beyond the clinical realm. According to Shaywitz (2003), Hinshelwood urged schools to establish procedures for screening populations of children for signs of congenital word blindness and to provide appropriate teaching to those children identified as dyslexic.

As cited in Lowe (2002), American neurologist Samuel Orton and his associates inquired into the neurological factors that could contribute to dyslexia in the 1920s and 1930s. However, the prevailing view of dyslexia at that time was best citied in *Grey's Summary of Investigations Related to Reading*. According to Lowe, this committee did not believe that brain dysfunction caused reading problems. In fact, of 436 references cited, just one (Hinshelwood's) proposed an organic or inherited justification that might prevent normal children from learning to read (Lowe). Orton would continue to conduct his research on dyslexia, providing a model on the evolution of the condition from 1925 to 1948. Shortly after his death in 1948, the Orton Dyslexia Society was founded and has since become the International Dyslexia Association. Up until the time of Orton, researchers in the field of dyslexia were made up of physicians, primarily ophthalmologists and neurologists (Lowe).

The third phase of the evolution of dyslexic studies began in the early 1950s extending into the 1970s (Guardiola, 2001). This evolution stage opened up the study of dyslexia to psychologists, sociologists, and educators and led to a substantial breadth of research in the field and, consequently, a variety of clinical, research, and educational approaches to understanding the condition of dyslexia. As cited in Guardiola, towards the end of the evolution stage of the history of dyslexic studies, Geschwind, a Harvard neurologist, provided new research findings supporting possible neurological contributors to dyslexia including temporal brain findings,

hemispheric theories, immune system theories, left handedness and left-eyeness, in addition to findings that males had higher prevalence rates for dyslexia than did females (Guardiola).

The final stage of the evolution of dyslexia occurred after the 1970s and is known as the modern theories (1970-2000) (Guardiola, 2001). The fields of psychology and neuroscience have provided an array of new findings within the area of dyslexia research. According to Guardiola, Isabelle Liberman and associates described the relationship between human speech and phonemic awareness. Furthermore, they claimed that poor readers' difficulties are usually linguistic in origin, specially rooted in the misuse of phonological structure and segmentation (Guardiola).

Further research into the understanding of dyslexia has resulted in significant legislative reform affecting educational institutions. In 1987, a report of the Interagency Committee on Learning Disabilities led to a congressional mandate to review and assess federal research priorities, activities, and findings regarding learning disabilities and to make recommendations and establish national priorities to increase the effectiveness of research on learning disabilities. As a result, four NIH-funded centers specifically dedicated to increasing the understanding of learning disabilities were established (Shaywitz, 2003).

According to Bender (2004), Bakker developed the Balanced Model Theory of Dyslexia in 1990 involving the balance of hemispheric activity between the left- and right-brain cerebral hemispheres during the reading process. Bakker identified both L-type dyslexia or linguistic and P-type dyslexia or perceptual (Bender). Other researchers have investigated the dysfunction into the timing of speech sounds among dyslexics and the discovery that by using computer-processing language programs, some children were able to advance their reading levels by 2 years after just 4 weeks of training (Sousa, 2001). Research using brain scan analysis has found

that poor readers' brain scans showed more frontal lobe activity than did good readers' brain scans. Furthermore, brain imaging studies have shown a significantly reduced blood flow to the left angular gyrus in people diagnosed with dyslexia (Sousa).

Studies into the phenomenon of dyslexia have evolved through four distinct stages from the late 1800s and are entering yet another stage in the millennium. From the identification of single-case studies of individuals with developmental reading difficulties by a few committed practicing physicians to entire research teams dedicated to the understanding of the complex neurological factors that contribute to various reading irregularities, the evolution of the study of dyslexia has grown tremendously. Although the body of research over the past 100 plus years has contributed to several theories related to dyslexia, no single theory has surfaced as the principle cause of this condition. Perhaps because of the convergence of the complexity of the condition of dyslexia coupled with heightened interest in this topic, theories as to etiology continue to surface in this postmodern era of dyslexic studies.

Definitions and Diagnosis

Although the term dyslexia was introduced in 1884, its definitional evolution has seen many terms over the past 122 years. Guardiola (2001) stated that the term "word blindness" was presented in 1877 to describe the condition of an adult aphasic patient who had totally lost his ability to read. In 1890, alexia or dyslexia was defined as a form of verbal amnesia in which the patient loses the memory of the conventional meaning of graphic symbols (Guardiola). According to Guardiola, Hinshelwood established the term "congenital word blindness" in 1895 followed thereafter by Morgan's term of developmental dyslexia. In 1917, Hinshelwood published yet another series of articles on the subject of dyslexia, pointing out that the condition

could be classified into three distinct groups. The groups included Alexia, for cases of mental retardation with a reading disability; dyslexia, for common cases of small delays in learning to read; and word blindness, for severe cases of pure reading disability. In the 1920s Orton proposed the definition of "strephosymbolia" or twisted symbols, a theory that focused on reversal errors during the reading process (as cited in Guardiola). During the 1930s, most research on dyslexia was confined to Scandinavian countries. In 1939, Edith Norrie founded the Word Blind Institute in Copenhagen for the purpose of diagnosing and teaching dyslexic subjects. Guardiola stated the classical definition of dyslexia that was popular from the 1940s to the 1960s:

> . . . a deficit in the acquisition of age-appropriate level of reading and writing ability; this deficit is due to constitutional (hereditary) factors, it is often accompanied by difficulties with other kinds of symbols (numeric, music, etc.), it exists in the absence of other cognitive or sensory deficits, and in the absence of inhibitory influences, past or present, in the internal or external environment. (p. 11)

Given the proliferation of research in the area of dyslexia and the lenses through which this condition is viewed, specific definitions remain problematic. The scientific diversity of researchers conducting work related to dyslexia has expanded over the past 15 years. Consequently, relevant information is being generated from a wide spectrum of research areas. Research findings on dyslexia are now being published from fields such as linguistics, education, genetics, neuroanatomy, and visual and auditory processing (International Dyslexia Association, 2006). With more research in the field, the need for definitional clarity on dyslexia becomes even more acute. For instance, dyslexia is a term used chiefly by medical professionals, whereas learning disability is a term commonly used by educators. According to West (1997), dyslexia refers to a condition of children of average or superior intelligence who are either unable to read or who find reading extraordinarily difficult. The term learning disability, on the

other hand, is more general in its application, referring to similar patterns of unusual learning problems with the emphasis on performance in an educational setting rather than on neurological function. Learning difficulties is a comparatively neutral description that avoids the emotional overtones and resulting resistance that other terms sometimes carry with them (West).

Despite the many definitions of dyslexia, an explanation that accurately describes the current state of the field was published in 1995 in the Annuals of Dyslexia, just over 100 years since Berlin, Hinshelwood, and Morgan proposed their initial definitions (Lyon, Shaywitz, & Shaywitz (2003). According to Lyon et al., the Annals of Dyslexia defined this condition as:

> a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifested by variable difficulty with different forms of language, often including, in addition to problems with reading, a conscious problem with acquiring proficiency in writing and spelling. (p. 3)

Baumel (2006) gave a more recent definition of dyslexia that was developed in August 2002 at the International Dyslexia Association meeting in Washington, DC:

> Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge. (p. 1)

From a clinical perspective, the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (as cited in Lowe, 2002) defined the diagnostic criteria for 315.00 reading disorder as:

> (A) Reading achievement, as measured by individually administered standardized tests of reading accuracy or compensation, is substantially below that expected given the person's chronological age, measured intelligence, and age-appropriate education.
>
> (B) The disturbance in Criterion A significantly interferes with academic achievement or activities of daily living that requires reading skills.

(C) If a sensory deficit is present, the reading difficulties are in excess of those usually associated with it. (pp. 14-15)

Currently, some educators and theorists in the field of dyslexia are starting to research and publish the positive aspects of dyslexia. These publications are beginning to broaden the understanding of the condition of dyslexia and are consequently having a more positive impact on the definition of dyslexia as we currently understand it. Davis and Braun (1997) suggested that what is needed to understand dyslexia in its entirety is a paradigm shift in how dyslexia is viewed. This "New Perspective" proposed by Davis and Braun included seeing the positive aspects of dyslexia. Rather than considering dyslexia as a disability, as has been the predominant approach historically, Davis and Braun suggested looking at dyslexia as a unique gift providing specific traits to individuals with this condition that can be harnessed and used throughout one's lifetime. From both a definitional and conceptual perspective, Davis and Braun proposed that to fully understand dyslexia in all its complexity and individual patterns, we must start with a clear and accurate understanding of what dyslexia is, and furthermore, what contributes to this condition. This new perspective in how we understand and, therefore, approach individuals with dyslexia will bring out the positive as well as the negative aspects of the situation and allow us to see how dyslexia actually develops. Once we can recognize and explore this condition, we can more fully appreciate it as the gift that it really is (Davis & Braun). This "new perspective" of dyslexia could very well complement current definitions of dyslexia as we now know them, providing more understanding as to what some of the causes are of this condition.

Theories of Etiology

Research conducted over the past 120 plus years has contributed to an increase in not only the etiological factors of what causes dyslexia but also to alternative approaches in assisting those with this condition. Although there remain many theories as to the cause of dyslexia, many do propose multifactorial reasons; consequently, research on dyslexia, specifically as to its causes, has continued at a dizzying pace. Theories on what causes dyslexia have generally come from three tracks, notably from environmental, genetic, and neurological influences. Because of the complexity of this condition, factors of comorbidity are also addressed in the literature, not necessarily as causative factors in dyslexia but as occurring at a higher prevalence rate alongside those individuals who are diagnosed with dyslexia. According to Davis and Baun (1997), "Developing dyslexia involves some rather complex steps, and the timing has to be precise. In fact, the development of dyslexia is so complicated that it's a wonder anyone can do it" (p. 71). Part of this complication comes from environmental conditions that can occur during a mother's pregnancy, during infancy, in early childhood, and throughout the remaining developmental phases of youth and adolescence.

Neurological Factors

The earliest causes of dyslexia were thought to come from a deficit in the visual realm. According to Guardiola (2001), Morgan, Hinshelwood, and Orton all developed their theories of dyslexia as a visual perceptual deficit. From the late 1880s into the 1960s this was the prevailing view of what caused dyslexia.

Guardiola (2001) stated that in the 1960s, the Intersensory Deficit theory was introduced by Herbert Birch. This theory proposed that dyslexics experienced difficulties integrating the

information of two or more sensory systems. However, lack of valid evidence and supportive findings when comparing normal readers to reading disabled children has resulted in a lack of support for this view (Guardiola). Several other theories proposing either a neurological or sensory basis for dyslexia have been presented yet were criticized in the field of research for various reasons. Other theories that dyslexia could be caused by neurological or sensory deficits include problems from erratic eye movements, eye convergence deficits, and irregular functioning of the magnocellular system (Guardiola).

Two theories that proposed auditory deficits as causes of dyslexia include the Auditory Transcription Deficit Theory and the Auditory Perception Deficit Theory. The first theory suggested that dyslexics had difficulties transcribing written words into their phonological representations. This theory never actually became popular, although the current phonological theories of language deficits find some of their roots in this theory. The second theory, auditory perceptual deficit, proposes that uncorrected auditory deficits can impair normal development of language and speech resulting in reading deficits (Guardiola, 2001).

Comorbidity

Comorbidity is almost always evident in individuals with dyslexia (Marshall, 2004). Dyslexics experience difficulty in other cognitive and academic areas. Writing and spelling problems almost always accompany dyslexia. Dyslexic individuals frequently experience difficulties in math as well. Dyslexia can also overlap with other disorders such as ADD or ADHD that can lead to behavioral problems. As explained by Marshall:

> A child with dyslexia is twice as likely as other children to have ADD; about 15% of students with reading problems are also diagnosed with ADD. Conversely, a child with ADD is twice as likely to have difficulties with reading; about 36% of children with ADD also have dyslexia. (p. 48)

The symptoms of ADD and ADHD have many common characteristics to those of dyslexia. Because of this, there is a strong possibility that many children have been mislabeled as having ADD or ADHD when they actually have dyslexia. This could be as much as 10% of the estimated 15% of school children who have dyslexia, as, according to Marshall, only 5% are ever identified.

Dysgraphia, which means difficulty with writing, can often accompany dyslexia. Dysgraphia is a reflection of underlying difficulties with the written language when it is associated with dyslexia. Often the symptoms include sequencing difficulty as well as perceptual problems such as reversals, writing words backwards, writing letters out of order, and very sloppy handwriting (Marshall, 2004).

Dsycalculia, a learning disability with math, also is frequently associated with dyslexia. About 60% of children with dyslexia have problems with numbers and number relationships. In contrast, however, about 11% of dyslexic students excel in math, and the remaining 30% have average math abilities. Therefore, even though there is a strong association of dyscalculia with dyslexia, it needs to be considered a separate and different learning problem (Marshall, 2004).

Finally, dyspraxia, or difficulty with thinking out, planning, and carrying out sensor or motor tasks has been also associated with dyslexia (Marshall, 2004). Some of the characteristics of dyspraxia are thought to be associated with cerebellar or vestibular problems. The cerebellum is the section of the brain that is largely involved in coordination and bodily kinesthetic memory. Marshall indicated that the cerebellum tends to be smaller and more symmetric in children with dyslexia.

Environmental Factors

According to Healy (1990), "Different kinds of environmental factors, from chemicals to societal pressures…are potentially capable of resulting in abnormal brain interactions" (p. 147). Healy (1990) added that the "brain is not pre-wired to act just one way; instead, it gives the environment certain flexibility in selection" (p. 147).

Environmental conditions within an individual's home life have often been viewed as contributing to the condition of dyslexia. For example, the language environment at home and the type of reading instruction a child gets can determine the severity of the problem and even how the brain functions during reading (Healy, 2004). In addition, passive learning conditions in the home environment are thought to exacerbate the conditions that contribute to dyslexia. Degeneration of the vestibular system due to keeping the head still for long periods, as in watching television, has been implicated in acquired dyslexic symptomology (Hannaford, 1995).

An infant's developing visual realm might also inadvertently contribute to the conditions for developing dyslexic. For instance, infants who disorient their perceptions and recognize things in their environment that actually are not there are "self-creating perceptions" that they should not be able to recognize given the age of development. This ability to mentally complete fragmentary perceptions in the environment could influence the rest of the infant's life (Davis & Braun, 1997). Stress hormones during pregnancy that are raised to abnormal levels could also contribute to the development of dyslexia. These changes in hemispheric brain development of the fetus impact the structural lateralization specifically in the left hemisphere (Jensen, 1998a). According to Marshall (2004), the severity of dyslexia is influenced by learning experiences of the child and his or her environmental factors.

The importance of early diagnosis is significant in minimizing the severity of dyslexia. Educational institutions do not properly screen for dyslexia possibly causing children with this condition to fall behind academically. This environmentally induced neglect exacerbates the dyslexic child's already frustrating educational experience (Marshall, 2004). Levine (2002) suggested that socioeconomic realities impact a developing child's mind and evolving strengths and weaknesses. In other words, families can either contribute to a healthy environment that minimizes the effects of dyslexia or families can inadvertently deter mind development (Levine).

Another environmentally based theory that might contribute to the dyslexic condition was presented by Hannaford (1995). According to this theory, dyslexics tend to display oversensitivity to environmental stimuli from the stress-infection-antibiotic-yeast-sugar-toxins cycle that manifests itself in fears and phobias among dyslexics (Hannaford).

Hannaford (1995) reported a relationship between dyslexia and other learning disabilities to environmentally induced traumas. More specifically, between 94% to 97% of children with dyslexia had two or more abnormal neurological parameters equating to a cerebella or vestibular dysfunction. These traumas occurred as a result of ear infections, allergies, or actual physical assault through shaken baby syndrome (Hannaford).

Dyslexic children who come from homes where they have been exposed to wide sources of books as well as good language often learn to read reasonably well (Healy, 1990). Healy (1990) maintained that research is beginning to reveal that there are in fact positive environmental influences that support the learning trajectory of dyslexic children. Socioeconomic influences have a profound impact on the development of dyslexic children. Those from lower-class backgrounds are less likely to be identified in the home and, even more so, less likely to be assessed, diagnosed, and intervened with to enhance their learning. They are

less likely to be in a position to get professional help outside of the school system. It is not only the home environment that impinges upon the dyslexic's positive or negative learning process. The neighborhood, the community, and local resources impact upon a mind's evolving strengths and deficits (Levine, 2002).

Creativity

In *The Gift of Dyslexia,* Davis and Braun (1997) stated that creativity is what sets humankind above other life-forms. In addition, creativity allows us to conceive things that do not actually exist. It is from that experience that we can bring new things into existence. All original ideas stem from the creative process (Davis & Braun).

Creativity Defined

According to Gardner (1982) the greatest psychologists--from William James to Sigmund Freud, from B.F. Skinner to Jean Piaget--have all recognized the importance of studying the creative process. The study of creativity is fairly recent when compared to other scientific inquires. Puccio (1999) reported that Guilford pointed out the importance of studying creativity to the American Psychological Association in 1950. From 1958 to 1994 Torrance (1994) conducted extensive research on creativity working in defining, assessing, researching, and enhancing creative thought. The majority of the research has been focused on both identifying creativity and developing theoretical ideas about the nature of creative thinking (Puccio).

The history of the study of creativity parallels the history of attempts to investigate intelligence. Creativity, like intelligence, has been a label applied to a wide range of individuals, situations, and products. While this application of the terminology creativity, creative, or

creating seemed sufficient in the day-to-day world, like intelligence, the variant forms of creativity was in need of more precise formulation (Gardner, 1993).

The identification of a single definition of creativity has proven to be a challenging endeavor. According to Puccio (1999), an attempt to identify that single definition was made in 1961 when there was an excess of 40 different definitions of creativity. The inability to identify a single definition led to the argument that the concept of creativity was too large to study. Even though there was no success in finding a single definition of creativity, it was observed that the various definitions of creativity were not mutually exclusive. This discovery led to a system that would enable researchers to study smaller yet more manageable components of the larger complex concept of creativity. This system was called the four Ps--creative person, process, product, and the qualities of the environment (PRESS) that nurture creativity (Puccio, 1999).

Torrance (1994) stated that some degree of creativity occurs whenever people solve problems for which they had no previously learned or practiced solution and therefore go beyond where they have been before. Torrance defined creativity as "The process of sensing problems or gaps in information, forming ideas or hypotheses, testing and modifying these hypotheses, and communicating the results" (p. 7). He stated that the process could then lead to any one of many kinds of products that can be expressed through verbal, nonverbal, concrete, or abstract mediums. His definition made it possible to subsume the major elements of most other definitions (Torrance).

In his book *Creating Minds,* Gardner (1993) covered the approaches to creativity that have transpired over the past several decades. He began with the psychometric or the venerable testing approach. Three conclusions were drawn from this approach. First, creativity is not the same as intelligence. The second two approaches dealt with issues surrounding testing. First,

creativity tests were reliable so that if an individual takes the same creativity test more than once, he or she is likely to get a similar score. The second conclusion, also dealing with testing, was that paper-and-pencil tests for creativity did not demonstrate that individuals are necessarily creative in their vocation. These conclusions lead to constructive reactions among cognitively oriented researchers (Gardner, 1993).

According to Gardner (1993), cognitive researchers began to describe the ways in which creative individuals identified both the problem and the solution; these methods identified ways to examine creative work at the appropriate level of complexity. The ways in which creative individuals generate ideas including sets of ideas and the fact that these ideas evolve and deepen over a significant period of time, was brought to light by cognitive researcher Gruber's (as cited in Gardner, 1993) work. Gruber noted an "evolving system" approach to the study of creativity. In this system, the organization of knowledge in a domain, the purpose pursued by the creator and the affective experiences undergone by the creator are all monitored in order to understand the flow of the creative activity (as cited in Gardner, 1993). Creative thinking is a process of making links between movement and the senses, between ideas, and finally between the human minds's most sophisticated achievements--inspiration and evaluation. The chains of neurons are what make the connections and allow the neurons' their ability to "talk" among themselves (Healy, 2004). More recently, cognitive psychology has begun focusing attention on the emerging capacity to think about one's own mind. This process involves reflecting on one's memory (metamnemonic capacities), one's thinking (metacognitive capacities), and one's representation (metarepresentational capacities) as well as problem solving, problem finding, planning, reflecting, creating, and deep understanding. Gardner (2000) viewed metamemory or

creativity as the highest cognitive function and contended that it is here that brain science has yet to make its contribution to these attributes.

Two additional approaches to the study of creativity within psychology were found. These approaches are associated with noncognitive aspect of the individual, specifically the facets of personality and motivation. Studies at Berkeley Institute of Personality Assessment revealed that creative architects participating in the study exhibited a greater incidence of such personality traits as independence, self-confidence, unconventionality, alertness, ready access to unconscious processes, ambition, and commitment to work. As to whether or not the people exhibiting these characteristics become creative or they already were creative and therefore exhibited such traits is yet to be answered. According to Gardner (1993), it was suggested that the motivation for people to engage in creative activities is a previous history of rewards or positive reinforcements. In contrast, the importance of intrinsic motivation has been proposed. It was shown that creative problem solving occurs more often when people engage in an activity for its sheer pleasure rather than for an external reward (Gardner, 1993).

Healy (2004) recorded findings that suggest creative people have certain characteristics in common. He stated that highly creative people tend to become completely immersed in the materials at hand instead of focusing on some long-range product. He said, in fact, they concentrate so intently that they often lose track of time and are working simply for the intrinsic satisfaction of the activity. This experience has been named the "flow." Healy (2004) continued by saying that children often experience flow when they play. Highly creative people are capable of retaining their childhood ability to play with new ideas (Healy, 2004).

One less known perspective is the historiometric approach. According to Gardner (1993), this approach is particularly associated with the work of psychologist Simonton.

Simonton's approach is a methodology for investigation covering topics ranging from personality traits to the circumstances of training. Simonton reviewed large bodies of data to determine the decade of life in which creative people were the most productive. Although the method provided copious background information and insight about particular creative breakthroughs, it proved invaluable for assessment of individuals in a broader context (Gardner, 1993)

Psychological studies and brain science have confirmed that there are multiple forms of creativity and skill just as there are multiple forms of intelligence (Gardner, 2000). Healy (2004) said, "Creativity-intellectual and artistic- is a timely topic, but studying it is somewhat like dissecting a flower--by the time all the pieces are examined, the essence of the whole has vanished" (p. 351). In conclusion, Gardner (1993) stated, "The creative individual is a person who regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes accepted in a particular cultural setting" (p. 35).

Essential Traits of the Creative Personality

Creativity by its nature is extremely difficult to test. Healy (2004) recommended the four characteristics developed by Torrance as a useful creativity test. The four characteristics were:

1. fluency--multiple relevant ideas generated about a topic;
2. flexibility--different categories or shifts in thinking;
3. elaboration--use of details in working out an idea; and
4. originality--creative and imaginative ideas that others haven't come up with.

A fifth criterion, evaluation-selecting and refining ideas, was added to the list by educators who have worked to encourage creativity in students (Healy, 2004). Healy (2004) also presented some broader criteria useful in identifying creativity. Those criteria were:

1. intense absorption in activities;
2. an unusual ability to see patterns and relationships;
3. an ability to combine things or ideas in new ways;
4. the use of analogies in speech;
5. the ability to see things in a new or different way;
6. a tendency to challenge assumptions or authorities because of a reasoned-out difference in opinion;
7. independent decision-making and the ability to take action;
8. an ability to shift from one idea to another;
9. strong intuition: "seeing" answers to problems;
10. an ability to go "out on a limb, "take risks;
11. insightful observations or questions;
12. a tendency to create and test hypotheses;
13. an ability to tolerate ambiguity while exploring alternatives; and
14. an interest in new ideas, enjoyment in thinking and working alone. (pp. 354-355).

According to Healy (2004), a child who exhibits several of these qualities might have unusual potential for creativity. Levine (2002) presented nine basic neurodevelopmental qualities that all highly creative people share. The first behavior divergent thinking involves a willingness and ability to free-associate. It is the opposite of convergent thinking. Second is the top-down processing that is the ability to liberally voice one's own personal associations, values,

and perspectives over whatever information or circumstance one encounters. This behavior makes the person highly subjective in reacting to information and experience. The next behavior, return to Naïveté, is a return to a state of ignorance in that the person makes few if any assumptions about things but instead looks for a totally new point of view. Risk taking behavior allows individuals to risk being wrong as well as being ridiculed by others. They resign themselves, and possibly even enjoy, being controversial. The integration of technical skills with originality combines technical discipline with innovative thinking. Autonomy from peer pressures and standards allows creative individuals the ability to both think and produce differently from the accepted norms their peers. Suspension of self-evaluation behavior prevents creative individuals from being too critical of themselves while they are immersed in a creative activity. Next, discovery and pursuit of the right medium encourages individuals to search and come up with a channel for the creative drives they experience. Finally, the stylistic distinctiveness behavior is a willingness to develop a unique voice, niche, or personal style and then express the distinctiveness in work. Levine continued by saying that these qualities or traits are seldom conscious policy decisions, rather they are unconscious behaviors developed even during childhood.

According to Pitek (2006), extensive brain research was conducted in the late 1950s and early 1960s that clearly showed the brain is divided into two major hemispheres, the right brain and the left brain. It was also identified that each hemisphere specializes in its own style of thinking and has different capabilities. Obviously people need and use both hemispheres of the brain: however, brain research has revealed that humans have a preference for one side or the other and that preference effects brain development (Pitek). McCarthy (2006) stated that individuals' brains find certain modes of processing more comfortable; therefore, they approach

tasks with a preferred style for learning either more holistic or analytical. These different styles for learning, according to neurophysiologists, that come from inherited differences in the brain as well as a person's experiences train the brain to work (McCarthy).

Based on the functions performed, the right brain has been associated with the realm of creativity. The right hemisphere may also generate slower brain waves, called alpha rhythms, in contrast to the beta waves of analytic thought generated by the left hemisphere (Healy, 2004). Right-brained people are less sequential in their processing. They are holistic, whole-to-part learners and understand better by having things demonstrated to them instead of explained. They tend to master larger concepts first and then fill in the missing information last. Right-brained people tend to be accomplished at multitasking and prefer occupations that allow them to move around rather than sit at a desk. They also see a minimal need for rules, are impulsive, question authority, and embrace new challenges and ideas. Competitiveness and perfectionism are also traits of right-brained individuals. Exaggerated senses provide the ability that allows right brain thinkers to hear, see, and feel at a heightened level. They prefer creating to writing and are spatial three-dimensional in thinking with the ability to hold images in their head for longer periods. These traits make them naturals at art, music, or problem solving (Freed & Parsons, 1997).

Freed and Parsons (1997) stated that the farther people fell on the far right side of the right-brain continuum, the more likely they were to be extra intuitive and random in processing. Also people who fall on the far right side are more likely to store information primarily in pictures. They stated that people on the far side of the right-brain continuum have a strong visual memory that, unfortunately, tends to diminish the ability to perform logical linguistic tasks (Freed & Parsons). West (1997) noted that the concept of people being "left brained" or "right

brained" was misleading and suggested that the concept of people having "symmetrical" or "asymmetrical" brains helps in making sense of the diversity in thinking abilities.

Creativity and the Dyslexic

Children with dyslexia are often bright and capable. Many are creative thinkers and very good at thinking "outside the box". Many have artistic talent. Dyslexic children become adults who do very well in careers such as engineering, inventing, acting, designing, and drafting. Children with dyslexia often have a predominantly visual learning style (Marshall, 2004). Visual learning is also referred to as being picture smart. Experts have found that children with dyslexia tend to be quite picture smart. This of course means that their learning and thinking is in the form of pictures versus words. They typically have a good memory for faces or places and notice the little details about things (Marshall).

They also have a strong sense about how things both fit and work together. The picture smart person combines the outer world with the world of imagination unconsciously. Being picture smart allows the person to take in with the physical eye or imagine with the mind's eye then transform it into something that other people can see or touch (Armstrong, 2003).

The power of focused perception to reveal what is present however hidden to the casual observer falls under Gardner's (1991) intelligence of spatial intelligence. Spatial intelligent people have the ability to mold and shape the images in their mind through physical means such as drawing, sculpting, building, and inventing or through mental rotation and transformation of subjective images (Armstrong, 1999). West (1997) stated that the literature on creativity has often cited the fact that unusually creative people appear to be able to provisionally affirm at the same time several apparently incompatible assertions. He proposed that it is the excess of

connections and pathways seen in the brains of dyslexics that could be one of the factors that help them make associations between things that others miss (West).

Davis and Braun (1997) stated that all dyslexics have certain talents that are shared by many famous dyslexics who are considered to be geniuses. These are:

1. they can use the brain's ability to alter and create perceptions (the primary ability);
2. they are highly aware of the environment;
3. they are more curious than average;
4. they think mainly in pictures instead of words;
5. they are highly intuitive and insightful;
6. they think and perceive multi-dimensionally (using all the senses);
7. they can experience thought as reality; and
8. they have vivid imaginations. (p. 5)

The literature of creativity contains numerous references of highly visual dreamlike states as the source of major scientific discoveries (West, 1997). Getting ideas from daydreaming is a skill used frequently by highly creative people. Daydreams are the pictures that the mind comes up with while someone is awake, without effort and usually when someone is not thinking of anything important (Armstrong, 2003). Unfortunately daydreaming is viewed by society as lazy and unfocused. Interestingly it may prove to be the visual-spatial thinkers--the daydreamers who will envision the creative possibilities of life in the future (Armstrong, 1999). It is helpful if home and school foster a climate as well as provide opportunities that stimulate and cultivate creative tendencies. These opportunities to be creative might be the salvation of children who are having a difficult time succeeding academically (Levine, 2002).

Educational Perspectives

The state of education is a well documented and publicized issue. It frequently is covered on national news as well as popular talk shows. Gardner (1991) in *The Unschooled Mind* said that the topic of education rivals the topic of weather. The United States educational problems are a virtual obsession among policy makers with issues of philosophy and practice the focal point. When the discussion revolves around certain inadequacies in the schools, consensus can be reached. It is a different story. however, when the attention turns to the kinds of students wanted in the end; the process of achieving that becomes very controversial (Gardner, 1991).

Traditional Schools' Educational Obstacles

Pitek (2006) recorded, "Our educational system, as well as science in general, tends to neglect the nonverbal form of intellect. What it comes down to is that modern society discriminates against the right hemisphere" (p. 2). Freed and Parsons (1997) made the argument that a large part of the educational crisis is that the left-brain schools have failed to place an emphasis on creativity or critical thinking. Students have become passive learners simply waiting for things to be done to and for them. They are waiting for some kind of magic to enlighten them; unfortunately, this rarely happens. Many unsuccessful students at school are really excellent thinkers who simply think differently (Smith, 2005). Smith (2005) stated that many schools have reduced the curriculum to cover only what is covered on tests. Smith (2001) explained, "Instead of exploring a wide variety of subjects, classrooms become race tracks for grades with the horse demanding to know 'Will this be on the test?'" (p. 10). Schools traditionally emphasized regurgitation of information with a lack of emphasis on problem-solving skills. Freed and Parsons stressed that traditional American school have an emphasis on

order, drill, and repetition and were founded with the goal of creating a society of dutiful, obedient foot soldiers based on the German model. American industrial leaders wanted a system that would provide compliant workers to the labor force in factories and on railroads. Freed and Parsons presented a fascinating quote, "So began the dumbing down of America" (p. 78). In concurrence with this, the majority of teachers have said that learning can only take place if the student is quiet, still, listening, and handing in all their homework (Hannaford, 1995).

The higher order thinking of creativity makes an early appearance in the academic world. As early as kindergarten, children often have shown their preferred creative outlets by choosing particular activities in which to engage. As children progress through specific developmental stages, their creative abilities change. The challenge is to maintain an environment that fosters the creative abilities because these abilities are the precursors of brainstorming and innovative thinking. Brainstorming and creativity are compatible brain allies in that brainstorming involves starting with little or nothing then spawning a product or insight by using creative thinking. Based on this information, art, music and creative writing opportunities should be considered core curriculum if a tradition of innovation is to be expected by this country (Levine, 2002). School budget cuts are reducing the number of music, drama, and art classes in public schools because they are viewed as "right-brained frills." Competing agendas have caused the arts to wrongly be considered unessential (Jensen, 1998a). These curriculum courses boast self-esteem and motivate children who were born to create better than they were born to learn (Levine). According to Levine:

> Parents and educators should band together to combat all the school routines, inflexible requirements, excessive stress end-of-grade high-stakes test, and other educational policies that discourage, dampen, or leave little or no time for the cultivation of creativity and brainstorming. (p. 213)

In *Teaching With the Brain in Mind,* Jensen (1998b) presented a strong argument for both art and music curriculums in the schools. He commented that arts could help to lay the foundation for later academic and career success because they build creativity, concentration, problem solving, self-efficacy, and coordination and value attention and self-discipline. Jensen (1998b) quoted Jean Houston who said, "The child without access to arts is being systematically cut off from most of the ways in which he can experience the world" (p. 38). Jensen (1998b) continued by providing data that supported the role of the arts in school.

Douglas Elementary in Columbus, Ohio is predominately an arts-centered school. The school continuously has achievement scores 20 points above the district norms in 5 of 6 academic areas. Jensen (1998b) noted that the school always has a waiting list with more than 100 children's names on it. Other schools in the area were also experiencing similar academic success through an arts emphasis (Jensen, 1998b).

Smith (2003) stressed that real learning takes place when we reflect upon an experience, raise questions, and discuss ideas with others. She stated that the arts promote learning because they promote the asking of questions and the habit of reflection. With the arts, children explore together using inquiry and pursuing questions. Although the arts are important for all students, they are crucial for students whose educational lives are on the line (Smith, 2003).

According to Freed and Parsons (1997), the right-brain oriented person has a head start in the world of pictures. Unfortunately, our schools function primarily in the world of words at which right-brain oriented people are somewhat handicapped. This is why left-brain oriented people tend to thrive in classrooms that involve a lot of listening but not much active participation. They usually find tasks like grasping rules, spelling, grammar, punctuation, and language skills relatively easy to master. They also tend to excel in timed testing situations and

solving problems that require sequential logic. Fortunately for them, this is the profile of the typical school teacher as people who go into teaching are frequently people who have done well in school themselves. Freed and Parsons stated this happens because they are drawn toward the orderliness, sequentiality, and familiarity of education. Although females do tend to possess more nurturing characteristics, Freed and Parsons also noted that the reason the majority of teachers are female has to do with the fact that females are more likely to have a left brained, linguistic form of intelligence as girls develop speech and language skills much earlier than do boys (Freed & Parsons).

Freed and Parsons (1997) also proposed that right-brained people tend to associate school with negative experiences and therefore tend to avoid the teaching profession. When right-brained people do go into the field of education, it is usually with a crusader's perspective to right all the wrongs that they struggled through. Unfortunately, again, many are defeated by the system with all of it rigidity, paperwork, and politics and leave education for more rewarding professions (Freed & Parsons). As quoted in Freed and Parsons:

> Dr. *George* Dorry, a Denver psychologist states, for an individual who has an extraordinary strength in visual-spatial or right-brained functioning to be called 'learning disabled' because he doesn't fit the left-brained classroom is appalling. It's a definitional issue that is locked in by the left-brainers, who say, "If you don't have our skill, you are a learning-disabled student." (p. 30)

What makes this statement so powerful is that labeling such as disabled often becomes a self-fulfilling prophecy for these children. They often decide because others believe they are flawed, they must be and they no longer believe in themselves and their abilities. In reality, people learn instinctively; however, what is learned and how people view themselves as learners frequently depends on how they are treated by educators and role models in their lives (Hannaford, 1995). Many of these so called disabled children might have led extremely productive lives if not for their "crime" of having a different learning style (Freed & Parsons).

Washington State, in conjunction with the Learning Disability Association, screened convicts for ADD and dyslexia. Those who demonstrated significant signs of the disorders participated in a 14-week life skills program designed to help them deal more effectively with their disorder. Recent outcome data from the program indicated that the recidivism rate was decreased by 40% (Amen, 1998).

Many adults with dyslexia have gone through most of their lives without understanding the nature of their problem. Even though they knew that they had problems with reading, spelling, and writing, they did not understand why and simply labeled themselves stupid. Many gave up on school and simply dropped out. Studies conducted by the U.S. Department of Education have revealed that students with learning disabilities are nearly twice as likely to drop out of high school as are students without learning disabilities. According to a report by the National Adult Literacy and Learning Disabilities Center, 60% of adults with severe literacy problems have undetected and or untreated learning disabilities (Donnelly, 2000).

Competition in the learning arena is so high that parents frequently push cognitive skills on children too early. Then when children do not perform at that same heightened level as the kid down the block, they are taken for evaluation and diagnosed as learning disabled (Hannaford, 1995). Davis and Braun (1997) pointed out that in most cases, dyslexia should be described not as a learning disability but as a teaching disability. The authors also alluded to the fact that dyslexia should more accurately be called a conditioning liability. This is based on the fact that so much education is done on the conditioning level that is in opposition to the dyslexics' learning style (Davis & Braun). Hannaford stated that schools need to relinquish the inflexible beliefs about what makes someone valuable, right, or intelligent. Until these beliefs are changed, the promotion of labeling and petty competition will continue and could destroy human diversity

and potential. Hannaford noted that the SAT and IQ tests have set the criteria for intelligence in our society. These tests with highly linear, linguistic, and mathematical orientation disregard a complete population of people (Hannaford). Gardner (2000) stated that many of the current testing policies, although well intended, are fundamentally misguided.

School Reform

Anyone in the education arena should be familiar with the term school reform. Jensen (1994) commented that most school reform strategies that have been suggested, mandated, or implemented were destined to fail because they were not based on brain research and exacerbate the problem rather than solve it. Some examples given by Jensen (1994) were:

1. curriculum mandates (removes student choice and buy-in);
2. high stakes testing (creates teaching to the test and causes student's brains to "minimize");
3. rigid performance evaluation of teachers (causes teachers to perform according to the assessments; discouraging creativity);
4. strong controls on student behavior (creates resentment, apathy); and
5. bureaucratic, hierarchical, controlling, and punitive systems and tactics (school can be made to feel more like a prison). (p. 321)

Unfortunately, administrators and teachers in many educational systems are afraid of change. This fear keeps them from replacing established routines with new kinds of learning. Schools have become comfortable and their personnel do not feel that learning is taking place unless it is something that can be checked off in a book (Smith, 2005).

As a result of research and improved technologies, our lives are quite different; yet, amazingly a generation later, our school classrooms function predominately the same as they did in the 1940s, 1950s, and 1960s. Most people agree that children are "wired" differently today than they were a generation ago. They are more restless, more visual, and more right-brained thus making their learning style collide with the generally left-brain teaching style. In his book *A Whole New Mind* Pink (2006) stated that the last few decades have belonged to a certain kind of person with a certain kind of mind--computer programmers who could crank code, lawyers who could craft contracts. He stated that the keys to the kingdom were changing hands. According to Pink the future belongs to a very different kind of person with a different kind of mind--creators and empathizers, pattern recognizers, and meaning makers. The gap between the way teachers teach and the way students learn is becoming wider, thus schools are failing our children at an increasing rate (Freed & Parsons, 1997). Gardner (2000) stated that based on what we now know about the minds, the brains, and culture of students and what is required of human beings for the future, a fundamentally different kind of education is needed. Education must not simply require mastery of the most important disciplinary forms but must also teach the capacity to use them flexibly to solve new problems and create new lines of thought (Gardner, 2000).

Freed and Parsons (1997) presented 12 suggestions for creating classrooms and schools better suited for children today. Unfortunately many of these suggestions have not been successfully implemented into most schools today. The 12 suggestions are:

1. require all teachers to take classes, both in college and through regular in-service presentations, on different learning styles;
2. test all children for their learning style at the start of second grade;

3. place children with a teacher who either has a corresponding learning style or has demonstrated that he or she understands it and can effectively teach these children;
4. limit pupil-teacher ratios to no more than 15 to 1;
5. provide a stimulating, experiential environment;
6. employ longer lessons that integrate a variety of subjects;
7. make homework more meaningful;
8. reform testing;
9. eliminate IQ testing;
10. avoid retention of students;
11. eliminate tenure; and
12. foster more competition among schools. (pp. 160-180)

Three hundred years ago, schools served only the elite and were primarily religious in character. They came to serve the general public because of a demand for a functionally literate workforce. Demands have once again shifted. This fast-changing world requires a good education to a sizable majority of the future citizens in order to remain competitive. Schools must change and change rapidly as well as radically or they are likely to be replaced by more responsive institutions (Gardner, 2000).

Specialized Methods and Schools

Davis and Braun (1997) stated that when learning is presented experientially, dyslexics can master many things faster than the average person can comprehend them. Unfortunately, as presented above, the obstacles of educating a child with dyslexia in traditional public schools are extensive. The era of the "one-size-fits-all" school is quickly passing. The growing awareness

of children's different learning styles and parental preferences regarding structure and academics is moving the educational system toward an era of greater educational choices. With or without vouchers or open enrollment, parents have more school choices today then ever before. The choices range from home schooling, neighborhood schools, charter schools, parochial schools, private schools, and specialized schools with the number of choices increasing (Freed & Parsons, 1997).

In *The Human Side of Dyslexia,* Kurnoff (2000) provided 142 real stories about people either diagnosed with dyslexia of the parent of a child diagnosed with dyslexia. She reported that of the 82 parents she interviewed, 39% were shocked about their child's diagnosis because no educator had alerted them to their underachieving child. Many of them said they felt the school system should have alerted them sooner (Kurnoff).

A child with dyslexia needs an educational setting with a method and an environment that will be interesting, stimulate their visual, auditory, and kinesthetic modes of learning, and uses authentic assessment. Most dyslexic children will need some sort of special intervention or therapy that replaces reading instruction or tutoring to learn to read. Individualized instruction tailored to the dyslexics' unique learning needs would be ideal (Marshall, 2004). Unfortunately that is not realistic for the majority of children with dyslexia.

Instructional reading programs are geared to build essential reading skills and are not equipped to address the underlying neurological or cognitive issues involved with dyslexia. Although many schools provide early intervention to students identified at risk, dyslexic students will likely need specialized instruction beyond that provided by the intervention program. Marshall (2004) pointed out that large classes, overburdened teachers, outdated textbooks, and other issues can cause traditional public schools to be a poor choice for students with dyslexia.

Kurnoff's (2000) suggestion to parents was to get their child assessed as soon as possible if they think that something is not right. This early detection allows parents the needed time to develop an action plan. She also recommended that parents seriously consider a short-term stay of 1 or 2 years at a special school for dyslexia. She said it was her belief that the experiences at the special school are immeasurable and rebuilds self-confidence benefiting the children when they return to regular public education.

Shaywitz (2003) also remarked that it was in the best interest for a child with dyslexia to attend a specialized school. She stated that the typical public school's special education program does not help a dyslexic child to move forward. She also commented that public schools were slow in identifying a reading problem, provided too little instruction, and often the instruction was unproven, incomplete, and taught by untrained teachers.

Shaywitz (2003) commented that it would not take much to greatly improve public education for children with reading difficulties; but, until that time comes, parents must be vigilant to ensure that their child is receiving the most effective reading instruction that is integrated with his or her other academic subjects, and that his or her strengths are not overlooked. In conclusion, Hannaford (1995) provided a powerful statement, "It's time to let go of our judgments, expectations, and beliefs about what is 'smart' and glory in learning and in each unique learner!"(p. 202).

Overview of the Case Study Method

The case study method of qualitative research is an exploration of a "bounded system" or a case (or multiple cases) over time through detailed, indepth data collection involving multiple sources of information rich in context (Creswell 1998, p. 61). The cases are a program, event,

activity, institution, organization, or individual. The sources included in this case study research included direct observations, interviews, audio-visual material, documents, reports, and physical artifacts. The data were collected intensively. The researcher collected the data in natural settings and interpreted issues in terms of the meanings people bring to them. According to Marshall and Rossman (2006), case studies take the reader into the setting with a vividness and detail not typically presented in more analytic reporting formats.

Qualitative research is emergent rather than tightly prefigured (Creswell, 1998). Creswell (1998) stated that interview questions can change and be refined throughout the interview process. Learning about the world through qualitative interviews has extended our intellectual curiosity. "Qualitative interviews have operated for us like night-vision goggles, permitting us to see that which is not ordinarily on view and examine that which is often looked at but seldom seen" (Rubin & Rubin 2005, p. vii).

In conclusion, a qualitative case study can provide a rich indepth study of an institution using a diverse array of data collection methodologies. The case is examined within its setting providing a naturalistic picture. The data when analyzed can provide the researcher with information to produce a detailed narrative of the case.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this study was to examine a school specializing in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. I examined the elements that constitute the framework of a school specializing in the teaching of dyslexic children using a multisensory approach, therefore, fostering their creativity. I conducted a qualitative case study to examine Jemicy School for the purpose of determining what methods and practices were conducive to developing the creative potential of the dyslexic child.

Before any research was conducted, I obtained permission from the Institutional Review Board at East Tennessee State University. Written permission to conduct research at the school was also obtained from The Jemicy School in Owings Mills, Maryland (see Appendix A).

Data Collection

I used a qualitative case study design to gain an indepth understanding of Jemicy School. The qualitative research methods of interviewing, reviewing documents, and observing were used.

Interviews

Qualitative data were obtained using an open-ended semistructured interview process conducted at the site. Each interview was taped recorded then transcribed verbatim. All

participants in the study were given an alternative name to use during the interview that was placed on the transcribed tape for reasons of confidentiality. A copy of the transcribed interview content was sent to each participant to ensure that accuracy was maintained and to validate the data (Creswell, 2000). The participants were given the opportunity to suggest changes or provide additions to the transcribed interviews. No additional data from the interviewed participants were added to the transcribed interviews. I also wrote field notes while conducting the interviews. These notes were later transcribed and included with the interview data.

Purposeful Sample

Interviews were conducted with selected administrators and teachers regarding the specific teaching strategies that have been associated with high performance outcomes among Jemicy students with dyslexia. In addition, an open-ended semistructured interview method was used to elicit responses from parents concerning their perceptions and opinions of the school.

Three administrators were interviewed. One administrator participant was the head of the Jemicy Lower School. Another administrator participant was the head of the school. The third administrator interviewed was the director of admissions. Six teachers were interviewed, three on the first visit and three more the second visit. The teachers were chosen from the first- through fifth-grade faculty. Each had a minimum of 3 years of teaching experience at Jemicy. Five parent participants were interviewed, two on the first visit then three more on the second visit. The parent participants consisted of parents of both currently enrolled students and previously enrolled students.

All participants were on voluntary basis and the participants were given the option to withdraw from the study at any time without penalty. None of the participants choose to

withdraw from the study; therefore, no alternative participants were chosen. No substitutions for the first- through fifth-grade faculty were necessary.

Recruiting Protocol

The administrators and teacher participants were recruited in coordination with the head master of the school. The head master recommend a possible list of participants to whom I sent an e-mail requesting their participation in the study (see Appendices B & C). Once participants were chosen, Informed Consent Forms were distributed to the participants (see Appendix E). The forms were read and signed prior to the interviewing process.

The parent participants were chosen based on recommendations of the president of the Parents' Association Executive Board and or the Director of Alumni. The parents were sent a letter requesting their participation in the study (see Appendix D). Again, once parent participants were chosen they were sent Informed Consent Forms (see Appendix F). The forms were reviewed and signed by the participants before any interviewing began.

Interview Guide

The interview questions were developed using the responsive interviewing model. The model was based on the interpretive constructionist philosophy. The model's emphasis was that both the interviewer and the interviewee were human beings who formed a relationship during the interviewing process that creates ethical obligations for the interviewer. This model allowed me the ability to gain a depth of understanding. Furthermore, using the responsive interviewing method allowed the design of the interview to remain flexible throughout the project. Responsive interviewing allowed me to respond to and adjust further questions based on

responses from the participants (Rubin & Rubin, 2005). The interview guides consisted of main or focused questions as well as possible follow-up questions and probes. Follow-up questions were also developed for later interviews as needed. I developed the interview guides exclusively for this study based on the research questions for the study (see Appendices G, H, & I).

Interview Logistics

Interviews of administrators were scheduled individually at the convenience of the participants. Teacher interviews were scheduled during the teachers' planning time when possible. Alternative interviewing times for both administrators and teachers were scheduled during after school hours as necessary. The interviews with the administrator and teachers were conducted at Jemicy's Owings Mills site. The interviews with parents were scheduled on an individual basis once communication was established with participants. Interview sites were also determined at that time. All interviews were approximately 60 minutes in length; however, times were adjusted as necessary.

Ethical Protocol

The ethical considerations when interviewing human subjects must be top priority. This was accomplished following three main ethical guidelines: informed consent, confidentiality, and consequences. First, informed consent informed the participants about the overall purpose of the study, the design of the study, and any possible risk and benefits they might encounter from participating in the study. All participants said they clearly understood that their participation was voluntary. The informed consent document also provided information as to the right of the participant to withdraw from the study at anytime.

Next, privacy in interviewing participants was another important ethical consideration. In order to insure the need for anonymity, all participants were assigned pseudonyms. Identifying features of a participant were also concealed when necessary. Because the study involved publishing information potentially recognizable to others, the subjects agreed to the release of identifiable information. This was explicitly stated in the written agreement (Kvale, 1996, p. 114).

Finally, consequences of an interviewed participant were considered. Minimizing the risk of harm to the participant was a top priory. It was my responsibility to reflect on the possible consequences for the participants as well as the group they represented. The importance and benefit of knowledge gained should outweigh the risk of harm to both the participants and the groups they represent (Kvale, 1996).

Document Review

Lincoln and Guba (1985) defined a document as any written or recorded material not prepared for the purpose of the evaluation or at the request of the inquirer. Documents can be divided into two major categories: public records and personal documents.

Sample and Selection Protocol

Early document review was used to generate observation questions as well as possible interview questions for participants. The method of document selection I used was based on the research questions of the study.

To assess the quality of documents, four criteria: authenticity, credibility, representativeness, and meaning were used (Flick, 2006, p. 248). This included selecting

documents that provided insight into the school that could not have been obtained in another way. Such documents provided information on the school's resources, processes, priorities, and concerns. Documents that identified the school's strengths and weaknesses were also chosen.

Document Review Guide

I developed a document review guide using the research questions from the study as an indicator for the guide questions (see Appendix J). I reviewed a variety of internal documents from the school. These documents included but were not limited to documents such as school policy handbook, institutional mission statements and beliefs, teachers' lesson plans, students' progress reports, sample portfolios, and descriptions of program development and evaluation.

Ethical Protocol

The ethical considerations involved in document review methodology were minimal compared to interviewing and observations. One important ethical consideration that did exist involved students' records. As previous stated, confidentiality is required when dealing with any personal information about a participant. The data were stored in a locked file storage box at the researcher's residence during the study. Upon completion of the study the data will be stored in a locked storage box for 5 years. The data will then be destroyed by the researcher. A second ethical consideration when dealing with records involved the authenticity and credibility of the documents.

Observations

Visiting the school allowed me to observe and document interactions between students and teachers in the classroom. Field notes were used to document the observations. I used a lap top computer to record the observations and periodically used an audio recorder to accompany the written field notes. When observing, I used a double-entry page for the purpose of separating observations from my feelings or reactions to observations (see Appendix N). The double-entry page had two columns one for what was directly observed and one for what was interpreted from the events.

Sample and Selection Protocol

Classroom observations were conducted on a voluntary basis. The head master of the school identified specific classrooms of teachers who volunteered for observations. Selection of classes to observe were chosen based on the following criteria (a) classes observed must be grades one through five and (b) within the observations there must be a variety of academic disciplines including the arts. Observations took place at the Jemicy School's Owings Mills site. Observation times varied depending on the school's daily schedule.

Observation Guide

An observation guide was developed with a set of targeted concepts and criteria for describing the classroom being observed (see Appendix M). The research questions of the study were used to develop specific observation questions. The observation guide was a combination of both narrative describing events and a checklist of specific behaviors and activities that addressed the targeted concepts and criteria. I was an outside observer.

Ethical Protocol

Ethical considerations with observations, like interviewing, included: informed consent, privacy, and consequences.

Permission to observe classes was obtained from the head master of the school (see Appendix A). The guidelines of the school regarding classroom observations were followed by the researcher. Informed consent was obtained from the parents of the children in the classrooms. A letter was sent home to parents requesting signed permission to observe their child (see Appendix K). The letter included information about when, where, and how the observations would take place as well as the purpose of the observation. Parents were given the option of removing their child from the classroom if they were not willing to give permission for his or her participation.

As with the interview participants, privacy was maintained by using pseudonyms in the field notes of the observations. Observation field notes were also kept in a secure location during the research.

Consequences are an important ethical concern when using the observation technique. Research has shown that observations are the most privacy-threatening data technique for staff participants. The participants assume that they are being judged and, therefore, are uncomfortable. I assured the participants that the data from the observation would not be distributed or used for any purpose other than this study.

Data Analysis

The data analysis in this qualitative research was an ongoing process. Analysis began immediately during the interviewing and observation method because I constructed knowledge

during these processes that helped to determine what still needed to be learned and in turn helped to shape the direction of the study. Data analysis continued throughout the research and concluded with a narrative that reflected the case situation and experience in a unique holistic entity.

Interviews

The data analysis for the interviews was completed in two phases. Phase one consisted of transcribing the taped interviews. A professional transcriber was used to transcribe the interviews to ensure accuracy. Next, a summary was written of the contents of the interviews including information gathered from the field notes. Finally, the data were coded for the purpose of identifying concepts, themes, and events.

The second phase employed the process of sorting and comparing. Strauss and Corbin's Constant Comparison Analysis Method (Strauss & Corbin, 1998) was used with the interview data throughout the study. When using this method, I began by looking at the phenomenon with no preconceived theory in mind. The uniqueness of this approach was that data collection, analysis, and memo writing all occurred at the same time while a theory was being developed. Sorting occurred after all of the categories had been saturated. Writing occurred after the completion of sorting.

I began the data analysis with open coding for the purpose of developing categories from the data gathered in the interviews. Categories were developed about events, happenings, or instances. Within each category I looked for several properties as well as data that showed the extreme possibilities. Once the first categories in open coding were established, I returned to the field to collect more data for the intention of exploring other issues that were uncovered in the

first round of data collection. More participants were interviewed for the purpose of saturating the categories. I continued this "zig zag" process of comparing and collecting data until all the categories were saturated and no further information could be gleamed from new participants. Once the categories were saturated, the second stage of coding began (Creswell, 1998).

Next, axial coding was used for the purpose of comparing category to category. During this process I compared the data in the categories. I wrote short notes about the comparisons in the margin of the field notes. The categories were then sorted on index cards. During this process I used clear and precise memo writings providing detailed information for the purpose of insuring validity (Strauss & Corbin, 1998).

The next step was selective coding. During this step I began to develop a story line that integrated the categories from the axial coding. It was at this point that a theory slowly began to develop (Creswell, 1998).

The fourth step in the process involved the development of the conditional matrix. Here, I began to produce a visionary picture used to explain the opinions held by the participants. Finally, I proceeded to write the theory or theories that had been developed from the study (Creswell, 1998).

Document Review

Document review data provided useful information about the culture of the school. The data from documents were analyzed looking for patterns and themes. The patterns and themes identified from the interview data were used as a guide for analyzing the document review data. The data from field notes on the document review guide were also analyzed. Document review data were used for making comparisons with interview data.

Observations

Data analysis and data gathering for the observation technique were consecutive. There was no definite, fully anticipated point at which collection stopped and analysis began. One process flowed into the other (Patton, 2002, p. 323). According to Flick (2006), there are three distinct phases to observation thus requiring three phases to data analysis. Data collected from field notes on the observation guide were analyzed following these three phases.

First, the case study data from observations was initially analyzed and used to make a detailed description of the case and its setting. The descriptions were nonspecific and provided a "road map" for further observations (Flick, 2006, p. 220).

The second phase, referred to as "focused observation data," was analyzed to narrow the perspective on the processes that were the most essential to the research questions of the study (Flick, 2006, p. 220). I continually searched for themes and patterns. The themes and patterns identified in the data analysis of the interviews and document review were used as a guide for analyzing the observation data. This then enabled me to find out how certain processes factually work.

The third and final phase, the selective observation data, occurred near the end of the field study and was analyzed to find evidence and examples for the types of practices and processes found in the second phase (Flick, 2006, p. 221).

Quality and Verification

Validity in this qualitative research was of the utmost importance. Creswell (1998) pointed out that a case study requires extensive verification. I provided credibility, dependability, confirmability, reliability, and transferability of the study. In order to establish

credibility, I used triangulation of information. Triangulation of data refers to the use of a number of data collection methods to get a multiple viewpoint of the data. The methods in this study included observations, document review, and interviews. I also used member checking to ensure credibility. All participants examined transcribed drafts of interviews in which they participated. This ensured that the participants' perspectives were accurately recorded by me. In addition, for the purpose of credibility I employed the technique of peer debriefing. I located a person to review and ask questions about the study (see Appendix Q). This ensured that the study resonated with people other than myself (Creswell, 2003).

I kept systematic field notes using a protocol. Use of a protocol in observation helped assure that I gathered the pertinent information and applied the same criteria in the evaluation (Lincoln & Guba, 1985). I used a peer assistant in the coding process (see Appendix P). This further enhanced the internal and external validity of the study. An audit trail was used to insure that other individuals understood how the data were coded and categorized (see Appendix R). Systematic organization of the data ensured that the categorized data could easily be traced to the original transcripts if necessary. This ensured the dependability of the study. Furthermore, I enhanced transferability by doing a methodical job of describing the research context and the assumptions that were central to the research questions.

CHAPTER 4

DATA ANALYSIS

Introduction

The purpose of this study was to examine a school specializing in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. The study examined the elements that constitute the framework of a school specialized in the teaching of dyslexic children using a multisensory approach, therefore, fostering their creativity.

The focus of the study was to investigate The Jemicy School in Owings Mills, Maryland to identify effective techniques in the teaching of dyslexic children that could be incorporated into other school systems. The school was examined with the possibility of becoming a benchmark to highlight best practices for other schools, both public and private, to follow. This could provide educators with a road map for helping dyslexic children learn. The outcome might mean more educational and career-related opportunities for dyslexic children through college and beyond.

The following research questions were addressed in this study:

1. What specific teaching strategies and methods are used at Jemicy School to foster creativity among dyslexic children?
2. How are the innovative and nontraditional teaching methods used by Jemicy School developed?
3. Specifically how does Jemicy School incorporate the arts into the academic skills used to teach dyslexic students?

4. What are the perceptions about the school's learning environment from administrators, teachers, and parents?

Data Analysis

I conducted a qualitative case study examining the Jemicy School. I collected data by observing teachers and students in action, through personal interviews of administrators, teachers, and parents, and through an analysis of school documents.

Data were produced from interviews with 14 people who had direct contact to the school. The study's participants were divided into three groups consisting of three administrators, six teachers, and five parents. Each of the participants was interviewed for approximately 60 minutes using an open-ended semistructured interview guide developed exclusively for this study. Participants were selected with the help of the Head of School for the Lower Building at Jemicy.

The interviews were scheduled at the convenience of the participants, were audio taped for accuracy, and were subsequently transcribed by a professional transcriber. After the interviews were transcribed, the data were analyzed. The participants were allowed to review the transcriptions of their interviews to check for accuracy, mistakes, and or inappropriate statements (member checking). A peer debriefer was used to edit process and content of the project as it progressed (see Appendix Q). An auditor was used to review the project design and to verify accuracy in all sections of the research (see Appendix R).

Data were also produced from field notes of observations conducted at the school by me. I kept systematic field notes following a predetermined protocol. This assured that I gathered the pertinent information and applied the same criteria in the evaluation. The observations were

made during four separate visits to the school. I used a peer assistant in the coding process. This further enhanced the internal and external validity of the study (see Appendix P). An audit trail was used to ensure that other individuals understood how the data were coded and categorized.

The classrooms observed were purposefully chosen by the Lower Building Head of Schools based on teachers who volunteered to have their classrooms observed. Observation times varied based on the school's daily schedule. An observation guide developed exclusively for this study was used during the observations. The observation guide was a combination of both narrative describing events and a checklist of specific behaviors and activities that addressed the targeted concepts and criteria. I also used member checking to insure credibility. All participants were requested to examine transcribed drafts of interviews in which they participated. This ensured that the participants' perspectives were accurately recorded by me. In addition, for the purpose of credibility, I employed a person (peer debriefer) to review and ask questions about the study (see Appendix Q).

Finally, data were produced from the examination of school documents including the school policy hand book, teachers planning books, institutional mission and belief statement, descriptions of program development and evaluation, and letters from former students. A document review guide developed exclusively for this study was used during the review of documents. The data from documents were analyzed looking for patterns and themes.

The interview data were coded for the purpose of identifying concepts, themes, and events. The process of sorting and comparing using Strauss and Corbin's (1998) constant comparison analysis method was used with the interview data throughout the study. The patterns and themes identified from the interview data were used as a guide for analyzing the

observations and document review data. The data from field notes on the document review guide were also analyzed and used for making comparisons with interview data.

I then used open coding for the purpose of developing categories from the data gathered. Categories were developed about events, happenings, and instances. When the first categories in open coding were established, I returned to the field to collect more data for the purpose of exploring other issues that were uncovered in the first round of data collection. More participants were interviewed for the purpose of saturating the categories.

When the categories were saturated, the second stage of coding began. Axial coding was used for the purpose of comparing category to category. I compared the data in the categories writing short notes about the comparisons in the margin of the field notes. The categories were then sorted and I used clear and precise memo writings providing detailed information for the purposes of insuring validity.

Next, I began to develop a story line that integrated the categories from the axial coding, thus, a theory slowly began to develop. I then developed the conditional matrix that produced a visionary picture used to explain the issues as stated by the participants. Finally, I proceeded to write the theories that developed from the study.

The research took place in the fall of 2008. Because of the need for anonymity and for retaining accuracy of information, each participant was identified first by his or her group (administrator, teacher, or parent) and then was assigned a letter of the alphabet; thus, the administrators were labeled Administrator A through Administrator C; the teachers were labeled Teacher A through Teacher F; and the parents were labeled Parent A through Parent E.

As previously stated, the focus of the study was to investigate the Jemicy School in Owings Mills, Maryland to identify effective techniques in the teaching of dyslexic children that

might be incorporated into other school systems. The school was examined with the possibility of it becoming a benchmark for other schools to follow. The purpose in benchmarking this school was to develop a model that could be incorporated into other schools. The development of this model was to provide educators with a road map for helping dyslexic children learn. The research addressed the following questions:

Research Questions

Research Question #1

What specific teaching strategies and methods are used at Jemicy School to foster creativity among dyslexic children?

From the first research question, I looked at specific teaching strategies and methods that were used at the Jemicy School to foster creativity among dyslexic children. Regarding this question, there were numerous factors reported by 100% of the interviewed participants. The same factors were also observed by me during classroom observations.

One factor that was consistently reported from the participants' interviews was the school's environment. The uniqueness of the school's environment was expressed in several different aspects. The environment of the school is in direct contrast with a traditional school environment. First, the school is situated in surroundings conducive to learning. The campus is nestled in a quiet rural setting surrounded by woods with a creek running through the middle of the property. Because the origin of the school stemmed from a camp, the environment of the school purposefully continues to maintain the relaxed, camp-like feeling as a key element to the learning process.

Fort Play is one aspect of the camp-like atmosphere of the school. For 15 minutes each day, the students are allowed to go into the woods, choose a spot, and build a fort for themselves. Fort Play is an important part of the curriculum at the Jemicy School. According to Administrator A, "Many students in today's world are nature deprived; they don't experience nature anymore, they don't play, they don't create, they don't do the things they need to do to develop who they are as a person." The building of a fort teaches the students to be independent and make choices. It is a minisociety that provides a setting for the students to develop their own social and economic systems.

Fort Play also provides an authentic classroom for learning. The classroom extends to the woods and students engage daily in a variety of hands-on activities. During one of my observations of Fort Play, the students discovered a snake in the woods. This provided a teachable moment for the instructor to discuss with the students fundamental science information pertaining to the snake. The unplanned lesson provided understanding that could not be gleamed from simply reading about a snake in a textbook.

Learning outside the walls of the school is a common occurrence at Jemicy. I observed a written language class working on predicate expanders. The students had to come up with the predicate expanding words then act out or follow the words; this led the class through the woods and back. The students had to use creative thinking to come up with a word that worked based on the location of the class. We went from out the door, over the bridge, through the woods, to back to the classroom. This technique really made predicate extenders make sense to the students. They could actually see and understand the concept of the extender that could then be transferred onto paper.

The Lower School science classroom is a phenomenon in and of itself. When you walk into the room, you are immediately wowed by the animals that live there. During the second 15-minute recess, one of the science teachers stays in the room and gets all of the animals out of their cages. The students can choose to spend the recess time in the science room interacting with the animals and chatting with the teacher about them.

The atmosphere at the school is very relaxed and this is reflected in the attitude of the students. The atmosphere fostered an excitement for learning that was observed throughout the school. One factor that contributed to the relaxed atmosphere is that the hierarchy system of tradition educational systems does not exist at the school. One way this is accomplished is through the removal of the formality of using "Mr." and "Mrs." to address the faculty members and administrators. The students simply call the teachers and administrators by their first names. Administrator A explained, "The purpose of this is that we wanted a real homey feel-- by really making the environment friendly, kids are more likely to take risks and you learn from taking risks." Contrary to popular belief, I did not observe that this methodology fostered disrespect for faculty.

The fact that the students simply address the faculty by their first name establishes the sense of collaboration among faculty and students. Teacher D stated:

> The removal of that one little thing gives the students the idea that they can trust me and because I can trust her I know she has my best interest at heart and I know that she's going to do everything she can for me.

Collaboration between students and staff was evident throughout the school. One administrator participated in the annual musical alongside the students. The students viewed the school staff as mentors who worked with them; that, in turn, fostered the freedom to exchange ideas between the student and the teacher or administrator. Teacher B told me, "If they come in

with an idea for something they want to try, we are open to that--we invite them to change our plans - I think that's another way to let kids be creative."

Another interesting element of the environment I observed at the school was that a faculty member was allowed to bring a dog in the classrooms provided that the dog passed the "therapy dog certification" program. The purpose of having the dogs in the school was again to create a more relaxed atmosphere. Interestingly, the students did not get overly excited about the presence of the dogs, instead, the dogs seemed to have a calming effect on the students and added to the natural classroom setting.

All of the 14 interviewed participants discussed the atmosphere of trust that existed at the school. Whereas the rest of the world is focused on school safety from the outside, Jemicy's focus is on safety from the inside. Jemicy School truly embraces the belief that in order for students to learn and grow they must feel safe to take risks and make mistakes. Teacher A shared a story with me about a new student who came to Jemicy and was distressed when asked to read something. The class reassured the student by letting him know they could not read well either. The student's comment of "Oh, yea, I forgot where I was" spoke volumes about the trust and safety the students at Jemicy felt. The atmosphere of trust will be further discussed in research question 4.

Additionally, the student to teacher ratio at the school is four to one; this allows ample time for the individualized instruction used at the school. Administrator B shared:

> The success of the school stems from the fact that the students are taught at their remedial level in the core curriculum disciplines such as language and math, then taught at their cognitive level in the remaining curriculum disciplines, thus allowing them to feel successful and foster their creative thinking skills.

Administrator A remarked, “What we do here is pick out the gifts of our kids and knowing how to make them shine by teaching both to the part of the brain that is gifted as well as the part that needs remediation.”

This method of instruction makes the traditional grouping of students into grade levels unfeasible. At Jemicy, students are grouped into communities instead of grades as in traditional education classes. Students are grouped according to their social and intellectual development. Need is looked at more than age. The students' learning styles are also used to group the students. The letters from the word J-E-M-I-C-Y are used to identify the communities of students on the Lower and Middle School campuses. Calling a class by its letter name is a tradition at Jemicy that dates back to the school’s inception in 1973. The Lower School is made up of students in the JE Community, M and I Groups.

The school communities are ungraded, and the classroom placement is flexible. Students progress from the JE Community to M and then to the I Group. Jemicy’s Lower School curriculum is geared to develop each student’s foundation in reading, writing, spelling, and math. Science and social studies, on the other hand, are taught without relying on these abilities. Students are free to learn challenging material that is commensurate with their cognitive level. Because all students develop at different rates, this approach to grouping provides for the natural development of students.

Another method used at the Jemicy School that contributes to the environment revolves around monitoring students’ progress. Jemicy Lower School is a nongraded school meaning that traditional grades are not given to the students. Informal assessments are used in the lower grades. Grades are not given until sixth grade and they are not formal until eighth grade. Standardized test are not given until seventh and eighth grades. Progress is formally assessed

three times during the school year using a "bench-marking" system developed at Jemicy. The idea behind this is to get students excited about learning, rather than working to receive a specific grade. This approach tends to develop a love of learning among students at Jemicy. This, in turn, fosters a propensity for students to become lifelong learners. Administrator C remarked, "It's not about grades or test scores, it's about the student learning."

Homework is another unique element contributing to the environment at the school. Administrator A stated, "Children need to play--they need to be children and the brain needs to rest." The school policy is that JE Community students do not receive any homework. The older students in M and I Groups have minimal homework, and they have a study hall or skills lab at the end of the day during which they complete all or most of their homework. Administrator A added, "It is important that we teach them how to do homework so they can be independent learners and develop a sense of independence themselves."

A cumulative record is maintained for each student. Those records include progress reports, aptitude test scores, notable achievements, accomplishments, and extracurricular activities. Those records include authentic assessments and can include samples of the students' work and are similar to portfolios.

Another method used at the Jemicy School concerns the way teachers encourage students' participation. The school encourages students' participation using a teaching technique called "responding to the response." This approach rewards students for their engagement. The teacher responds to the students' response. Therefore, it is the student who answers the question who gets the attention. It does not matter if the answer is wrong or right, the child who takes the risk gets the attention. According to the Jemicy web page, experience demonstrates that students who actively participate in the educational process reap the greatest rewards and are best

prepared for the demands of college and career. This also involves the methods of questioning used by the teaching staff. If a student gives a wrong answer, the teacher helps to guide the student to find the correct answer. I observed on numerous occasions that whenever students requested assistance from the teachers, they did not simply give students the correct answer, rather, they guided them to find the answer for themselves. I observed also that the staff members encouraged the students to think of ways they could solve the problem rather than simply giving them solutions.

The next factor concerned specific teaching strategies and methods used at the Jemicy School that involves the specific curriculum the school employs. The teaching methods for language used by the school are based on the tenets of Orton-Gillingham. The core curriculum methods used at the Jemicy School are experiential and multisensory education.

In experiential education, the student becomes more actively involved in the learning process than he or she would in a traditional classroom. In experiential education, learning occurs from the students' active participation in the event. During my observations of the school, I noted that the students were always actively involved in learning and the buzz of knowledge was heard all around. One reason for this is that oral skills are encouraged as well as validated at the school. Students are allowed to discuss freely. Oral assignments and assessments are frequent occurrences at the school. Administrator A remarked, "Learning isn't about what we learn in a book--true education is getting ready for life."

Experiential education also eliminates the concept of ideas or thoughts being either right or wrong. My observations, as well as through findings in the interviews, affirmed this belief at the Jemicy School. Teacher B commented, "There is no wrong or right at this school. Everything is simply a learning process and the students incorporate that into their daily

routines." Teacher C remarked, "It's not about the mistake, it's about learning from the mistake. Making mistakes and learning from them encourages thinking outside of the box." Administrator A also commented on the concept of learning from mistakes, "Kids learn more from what they get wrong than from what they get right."

Multisensory learning is the backbone of the curriculum at Jemicy. Multisensory learning involves the incorporation of strategies in a lesson that uses two or more senses. Administrator A remarked, "What goes on here is true multisensory education." Teacher B confirmed, "We do everything in an incredibly multisensory way by having all kinds of ways that young kids can use not just their hands but their every sense for learning." The learning styles of the students and Gardner's (1982) theories of multiple intelligences are not only validated by the teachers but also used to plan lessons. One teacher showed me an MI notebook in which information was kept about different learning styles and strengths and weaknesses of students. The teacher explained about using the notebook to plan lessons and informal assessments for the class. I observed evidence of this teacher's note writings on the pages of individual students.

Finally, an interesting technique that I observed while at the Jemicy School was the use of a binder that is referred to as the "external brain." The binder was carried from class to class by the students and was used when needed. Administrator C clarified the reasoning and methodology behind using the binder as a technique to foster learning. The binder or notebook is started when the student enters Jemicy. It contains basic information that the dyslexic student needs to know but often has a difficult time remembering. The notebook is highly personalized to meet the individual student's needs. The student is free to use the notebook to look for information whenever necessary. Administrator C commented, "Using this technique frees the

student to be able to think more creatively without having to stress about such things as spelling rules."

Research Question #2

How are the innovative and nontraditional teaching methods used by Jemicy School developed?

From research question # 2, I sought to examine how the innovative and nontraditional teaching methods used by Jemicy School were developed. Although the development of teaching strategies and methods is an ongoing process, many of the strategies and methods employed at Jemicy were established with the foundation of the school and are embedded in the school's philosophy.

For example, the camp-like environment of the school was established at the founding of the school. From reviewing the documentation of the founding of the school, I discovered that the parents of campers who had experienced their children's success encouraged the founding of the school that would reflect the feel of a camp. Therefore, Joyce Bilgrave and David Malin teamed with educator Margaret Rawson and psychologist Roger Saunders, both internationally recognized pioneers in the field of dyslexia, to pool their expertise to develop such a school. Thus, the Jemicy School was born. According to Administrator A, "Fort Play is here to stay." The environment of the school is one of the main contributors to the experiential curriculum used by the school.

Experiential learning is also deeply rooted in the philosophy of Jemicy School. The philosophy states:

> A school is established as a group in which people are taught or led to learn, but it is as individuals that they learn through experiencing group life and developing unique

> personal competencies and understanding of their world. Just as, in Aldous Huxley's words, "It is no good knowing about the taste of strawberries out of a book," so each student needs to experience for himself the worlds of city and country, of nature and human culture. These become part of him through all his senses, through emotional and spiritual appreciation and responsible involvement in all the world about and within him, and by the active process of the ordered observation, problem solving, and critical thinking which we call intellectual functioning. Each person is born with a distinctive combination of potentialities on which, by the time she comes to school, a unique set of experiences has been at work making her a separate individual, different from all others. At the same time, she is a member of the human family, with certain basic physical, emotional, and spiritual characteristics and needs, which she shares with all of us. It is this that makes society both necessary and possible. A school life that promotes the healthy, vigorous, joyful growth of its students should provide a well-planned physical setting and general program. Such dependable security gives a firm foundation and a stable framework within which each student can live a cooperative and rewarding social life while she is developing from dependent childhood into self-reliant adolescence and adulthood (Jemicy School, 2008).

The faculty members of Jemicy School are highly trained in the teaching methods certified by the International Dyslexia Association that include both experiential and multisensory education. The school uses several marketed programs such as *Project Read* that already incorporates creativity, the arts, and multisensory techniques into them. Administrator B stated, "The head of the school has decentralized the system. He makes sure that the teachers are properly trained and then he lets them do their job."

During our interview, Administrator C shared information with me about how the teaching staff of the school is formally trained:

> First we seek highly qualified people who share the philosophy of the school. Then we make sure that they are adequately trained in the specific techniques and programs that we use at the school. We also believe in continually training our teachers in the most current methods.

At Jemicy, there is an ongoing commitment to professional development. The teaching staff members are regularly encouraged to attend conferences and training secessions related to teaching dyslexic students. Many of the teaching staff are also actively involved in leading

training secession. Administrator A commented, "Our teachers are highly dedicated professionals who are empowered to do what they do best."

Another important fact about the Jemicy faculty members is that they all buy into the philosophy of the school. No one had to sell them on the teaching methods used by the school. They teach at the school because they said they believe in the mission of the school. This was evidenced in all six of the teacher interviews that I conducted. Teacher F stated, "I wouldn't teach anywhere else. I truly believe in what we do here and I know that it works." I also noted that a large percentage of the faculty and staff at the school had personal experiences with dyslexia. They are either dyslexic themselves or have children who attended the school. Teacher C stated:

> It [teaching at Jemicy] was the first time I felt like I found a community where my experience and my own faults and achievements would help the children and it's been a lot more rewarding for me than I was expecting.

When questioned about lesson plans, all six teachers stated that they did, in fact, write somewhat formal lesson plans; however, they were not required to follow them verbatim. Teacher A stated, "We are given the freedom by the administration to use what we have been trained to do. They [administrators] trust us to see that these kids succeed."

Even though the school has a relaxed atmosphere, there is structure in the school. All of the academic disciplines taught at the school have a specific scope and sequence they follow. The teachers follow the scope and sequence, but they are also free to adapt their plans based on the students' needs, the direction that a specific lesson might lead, or the occurrence of a teachable moment. Teachers are allowed to use their creative abilities to incorporate student experiences as well as multisensory activities into their lesson plans. Administrator A commented:

> We do not believe one size fits all. This is not a cookie cutter approach. We really believe in diagnostic descriptive teaching. If something isn't working for a student the team comes together and makes decisions about what changes need to be made.

The teachers have weekly staff meetings that provide continuity for the teaching methods that support the philosophy of the Jemicy School.

Research Question #3

Specifically, how does Jemicy School incorporate the arts into the academic skills used to teach dyslexic students?

With research question #3, I focused particularly on how Jemicy incorporates the arts into the academic skills. One simply needs to walk the halls of the school to realize how vital the arts are to the school. Art work covers the walls of the school's interior and examples of creativity permeate the campus grounds.

The school offers an extensive art curriculum that includes visual arts, dance, music, and drama. The art curriculum is designed to complement the academic skills taught at the school. For example, the visual arts class allows the students to explore the creative processes through two-dimensional art theory and concepts. Students paint, draw, study various artists, and learn about their influence and style. The dance curriculum seeks to give students the opportunity to enjoy motion through dance in a relaxed, creative, and encouraging environment. Integrating music into the curriculum stimulates the imagination and enhances the study of other disciplines. The music program is designed to be aesthetically, emotionally, socially, and intellectually enriching for the students.

Because one of the core curriculum guides of the school is multisensory, and multisensory learning is strongly project-based, components of art are naturally incorporated into the academic skills. The expression of knowledge in different modalities other than the

traditional written work is an area in which the Jemicy School excels. For instance, students might sing a song, perform a play, or paint a picture to show that knowledge has been acquired.

Each fall, the school chooses a school-wide unit of study. The theme for the unit this fall was islands. Students were allowed to choose how they would learn about islands. The use of the arts in the curriculum was evident in every class's island study.

In the science class, students chose to construct volcanic islands. The students discussed the landforms, vegetation, the kinds of animals that would be found on the island, and the habitat of the island. The students worked in groups to construct the islands. Some students were busy gathering materials to construct the island while others were making animals out of clay for the island model. The students were encouraged to come up with new species of animals that could live in their island habitat. The students were allowed to discuss reasons for their choices and were sometimes asked to justify their choices.

The math class was in the process of building bamboo boats on one of the days I conducted my observation. They used their math skills from geometry by measuring and problem solving. The students had to come up with the design and then decide how the boat would work best.

Other students in the school chose to study life styles of the people living on islands by examining their dress and ritual customs. These studies involved the display of student-made costumes from the island and island dances. While in the language arts classes, the students were making dioramas to illustrate books they had either read or written about islands. Drama was also being used extensively in these classes as well. The students were acting out a reading story or vocabulary word.

Each year the Lower School produces a musical drama. All of the students in the school are involved in some capacity either on stage or back stage. I observed the preparation for the play "Alice in Wonderland." The students built elaborate settings including the stage and props for the production that required them to use their math skills. Although the school staff members were involved in building the settings, I noticed that the students were problem solving any challenges that arose during the development of the setting.

Not only are the arts incorporated into academic classes, but the academic classes are also incorporated into the art class. The day I observed the visual arts class, they were making clay to be used to build islands. The students had to come up with ways to create the clay including the choice of materials. Science was incorporated into the project with a discussion of chemical compounds and the mixing of specific elements. Math was also included in the project in that the students had to measure, mix, and know the melting point of wax.

As previously stated, the school's reading program is *Project Read*. *Project Read* is a reading program that incorporates concepts and skills of language through multisensory strategies. The program is rooted in the notion that creativity is the key to seeding abstract concepts and making them concrete. Therefore, the use of art is extremely evident in the reading classes at Jemicy.

Research Question #4

What are the perceptions about the school's learning environment from administrators, teachers, and parents?

Research Question #4 addressed the perceptions about the school's learning environment from administrators, teachers, and parents. The atmosphere of the school was again a major

factor and was cited as the most positive perception of the school by both school staff and parents. Of the nine school staff members interviewed, 100% made comments about how much they loved their jobs and how exciting it was to work at the school. Teacher A stated, "Being here, I have suddenly seen the true school--exploratory learning--I love my job; I get up every morning excited to go to work--this is my life and I love it." My observations revealed that the entire school staff truly was excited about being there. Administrator A commented, "There is a spirit in this school that just does not exist in any other dyslexic school." Teacher F stated, "It really is a magical place." Teacher A also stated, "Teaching at the Jemicy School is 100 times different than I ever expected a teaching job to be. Being here enthralls me to teach more and to learn more." Administrator B shared, "I laugh everyday in the enjoyment of the students."

The school's environment was also an important element to the six parents interviewed. Parent B described the Jemicy environment this way, "The school is all accepting--a comfortable place where children seem to feel that they can be whoever they are." Parent C's comment about the environment was, "The school is alive and it brought life to my child as well." Parent A contributed, "It is the happiest place-the teachers are happy, the students are happy; it's just a happy place." Parent D remarked, "There is no stigma attached to this school; it's just a fun place to learn."

The parent participants were all asked to explain what influenced them to send their child to Jemicy. Parent A's response was, "Just walking around the school and seeing all the happy faces on every single student's face plus the whole teaching environment." Parent E stated, "The fact that the teachers were on the floor interacting with the students influenced me greatly." Parent A commented, "My first impression was are they learning or are they playing; but once I

sat back and watched, I saw that the kids were learning in a playing way and I realized there is so much learning in playing."

All six parents stated that the creative aspect of the school strongly influenced the decisions to send their children to the school. Parent E said, "When we toured the school and saw all the creativity going on, we were sold. We knew that this would be a great fit for our child."

All of the parents interviewed were asked if they considered their children creative prior to enrolling them in the Jemicy School. All responded with "yes," they did consider their children creative. Parent A stated, "He has always been a creative soul; he spent hours with Lego's, he always had drawing pads, he could always look at something and think outside the box. We knew that he's been our creative soul."

The parent participants were also asked if they felt the Jemicy School had increased their child's creative ability and if so, how. Again 100% of the parents' responses were a resounding "yes." All six parents said that both the environment and the curriculum of the school provided their child the freedom to express himself or herself, thus enhancing creative abilities. Parent C stated, "Jemicy was my child's salvation." Parent D remarked, "The school allowed my child to express himself in ways he could feel successful." Parent B, the parent of two dyslexic children, one who attended Jemicy and one who did not, commented, "Looking back, I can tell a total difference between the one who did not attend Jemicy in relationship to creativity. He did not get the creative benefits Jemicy provides."

All six of the parents' interviewed talked about the difficulties their child faced in public school. Students' self-esteem was an issue that was brought up by all six of the parents whom I interviewed. Again 100% of the parents stated that their child's self-esteem had increased by

attending the Jemicy School. Parent C remarked, "His self-confidence went up within a couple of weeks of being at Jemicy." Parent B stated, "Not only was my child excited about being at the school, it was also a huge boost to his ego because he was successful at something." Parent A commented:

> My kid had become a little withdrawn because school had become so challenging for him. They (Jemicy) gave him so many opportunities to express himself he spent hours simply creating. It really gave him his confidence back. What I loved most about Jemicy was that my child regained his confidence and became a much stronger and brighter young man.

The parent participants were asked to add any additional comment about the school. Parent B commented, "My child loved the school from the minute he was there. He loved the shop, the art, and the science room where he could hang out with the teachers and learn about the animals." Parent C reported, "My child came alive while attending Jemicy. Being on stage gave him a confidence that he will carry with him for the rest of his life." Parent D's contribution was, "The intimacy and the warmth of the teacher-student relationships are just so profound. It was a Godsend for my child." Finally, Parent A stated, "My son credits his success to the study skills that Jemicy taught him. They taught him how to look at something and apply his learning style to it."

The parent interviews revealed that parental involvement at the school is very high. The parents all commented that the school embraces collaboration between school and parents. Parent E stated, "The teachers of Jemicy have always been eager to work with me; in fact, they feel like family to me." All of the parents' interviewed were intensely involved in their child's education. They attended school functions regularly, either are or have participated in the school's parent organization, and communicated with the school staff on a regular basis.

When asked if they would recommend the school to other parents of dyslexic students, 100% of the parents responded "yes" they would recommend the school. Several commented

that they had frequently talked to the parents of perspective students and shared their experiences at the school. Parent F commented, "I would gladly be a recruiter for this school--not like they need it. Jemicy would be easy to sell it to anyone looking for a school for their dyslexic child."

One of the greatest measures of a school's success is how vividly and affectionately it is remembered by former students. I reviewed several letters written to the school from previous students. All of the letters contained sentimental comments about the students' experiences at Jemicy and what it still means to them today.

One Jemicy teacher had a saying by Gandhi hanging in the classroom that I think really reflects the perception of the school. It says, "Live as if you were to die tomorrow. Learn as if you were to live forever." Administrator A summed up the perception of the school very well by referring to the school as "The Disney World of Learning." He profoundly stated, "Jemicy isn't special education--it's just great education."

Summary

Chapter 4 provided an analysis of the data from the research as reported from the case study. The environment of the school was noted as the key factor contributing to specific teaching strategies and methods used at Jemicy to foster creativity among dyslexic children. Further, the uses of experiential and multisensory teaching methods were found to enhance the unique learning environment of the Jemicy School.

The innovative and nontraditional teaching methods used by Jemicy were developed as a result of the desire to sustain the camp-like experience of the school established in the school's philosophy. Additionally, the faculty members of the school are highly trained in experiential learning and multisensory teaching techniques. Because of the philosophy of the school and the

use of experiential learning and multisensory teaching techniques, the arts are consistently incorporated into the academic skills used to teach dyslexic students.

The perception of the school's learning environment from administrators, teachers, and parents was that the Jemicy School provides a unique, integrated, collaborative, educational opportunity for dyslexic students. In short, it was perceived by everyone involved in this case study as an exemplary model for the education of dyslexic children.

Chapter 5 provides a summary of the research findings of this case study. A conclusion of the study is also provided. Finally, recommendations as a result of the findings and recommendations for future research are given.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS FOR PRACTICE, AND RECOMMENDATIONS FOR FURTHER RESEARCH

Discussion

The purpose of this study was to examine a school specializing in teaching children with dyslexia for the purpose of determining what methods and practices were being used that were conducive to developing the creative potential of the dyslexic child. The study addressed the elements that constitute the framework of a school specializing in the teaching of dyslexic children using a multisensory approach, therefore fostering their creativity.

The focus of the study was to investigate the Jemicy School in Owings Mills, Maryland to identify effective techniques in the teaching of dyslexic children that could be incorporated into other school systems. The school was examined with the possibility of becoming a benchmark to highlight best practices for other schools, both public and private, to follow. This could provide educators with a road map for helping dyslexic children learn. The outcome could mean more educational and career-related opportunities for these children through college and beyond.

The following research questions were addressed in this study:

1. What specific teaching strategies and methods are used at Jemicy School to foster creativity among dyslexic children?
2. How are the innovative and nontraditional teaching methods used by Jemicy School developed?

3. Specifically how does Jemicy School incorporate the arts into the academic skills used to teach dyslexic students?
4. What are the perceptions about the school's learning environment from administrators, teachers, and parents?

Executive Summary

The learning environment of the school proved to be the most influential teaching strategy of the school. Researchers have shown that the learning environment can have a profound effect on student achievement. Jensen (1997) provided extensive research data on the effects of environment on learning in his book *The Learning Brain*. He provided data from a research study of rats at UC Berkeley that proved with increasing amounts of environment enrichment larger brains were developed. The research findings also demonstrated that the enriched environment increased the support cells in the brain because the nerve cells were increased and the junction between the cells (the synapse) was increased in dimensions. According to Jensen (1994), a study conducted at the University of Alabama at Tuscaloosa found that the results were similar in working with children. The children who were exposed to the enriched environment had significantly higher IQs and the results were still evident when the children were retested 10 years later.

The distinctiveness of the Jemicy School's environment was demonstrated in several different aspects. The most significant of which was the camp-like feel of the school, a uniqueness that has existed from the initial conception of the school. Because the formation of the school came from a camp, the environment of the school decisively continues to maintain the relaxed, camp-like feeling as a key element to the learning process.

Powell (2004) from the Department of Recreation and Leisure Studies at the University of Georgia conducted research studies in partnerships to support school children capitalizing on the camp experience. He discovered that the camp-school partnerships were natural collaborations and they allowed learning and growth. His research provided evidence that the outdoor education programs increased students' ability to solve problems and work as a team (Powell). Powell measured teachers' perceptions of student learning after attending an outdoor education program. The results showed that students gained knowledge in all subject areas and the greatest gains were in science, physical education, art, and music. The greatest overall gains were in learning new skills, discovering new things that they were good at, and improving cooperation. Gains were also found in improved communications with peers and teachers, increased decision-making skills, as well as transferred skills learned at camp to the classroom (Powell).

Jensen (1994) reported research that found brains grew better in real-world environments than in artificial learning environments. Furthermore, it was found that learners suffer from consistent intrinsic under motivation in artificial learning environments; however, for real-world tasks there is greater intrinsic motivation. Therefore, we may be able to enhance brain growth and learning by improving the learning environment (Jensen, 1994). The Jemicy School provides an example of an institution that has incorporated the findings of this research into its learning environment.

Fort Play is one of the most significant aspects of the camp-like atmosphere of the school and a vital component of the curriculum. Aside from being an ideal setting for authentic learning, it also provides learning through the opportunity for students to play in the woods. The participation in Fort Play encourages the students to develop their own minisociety. In her

article, *Building Your Field of Dreams,* Hudson (2006) discussed the need of telling educators the importance of creating meaningful play environments for children. She stated that outside play environments are actually outdoor learning environments that promote the well-being of children. This approach mirrors the philosophy of the Jemicy School.

The climate of the Jemicy School is very comfortable and is reflected in the attitude of the students. This fosters an enthusiasm for learning that was observed throughout the school. One factor that contributed to the relaxed feeling in the school was the removal of the hierarchy system used in tradition educational systems. One way this is achieved is through the removal of the formalities of Mr. and Mrs. for the faculty and the administrators. Jensen (1994) stated that current brain research suggests that bureaucratic, hierarchical, controlling, and punitive systems and tactics that make school feel more like a prison are determinable to learning and educational leaders should reconsider the use of such strategies.

Collaboration between students and the staff was highly visible in the Jemicy School. Students and teachers worked together on numerous projects and activities throughout the school. Collaboration between teacher and student is traditionally refers to the children's conformity with adults demands. The teacher who strives to collaborate with students should represent the teacher's reciprocal relations with children that occur from respect for children as people and the nature of their development. Teachers should minimize authority as much as possible given that collaboration is important because it reflects a respect for equal opportunity for all class members. When the teacher participates alongside the students, he or she is seen as a player and opportunities arise for the teacher to think aloud and thus help children become more aware of rules and strategies (DeVries & Zan, 2000).

Traditional grouping of students was not seen in the Jemicy School because the teachers instruct the students on both their remedial and cognitive levels. Students are grouped based on needs and learning styles instead of age equivalence making placement very flexible. Copeland (1998) stated that strong evidence exist showing a child's experiences, background, learning needs, strengths, and interest have more to do with how children should be grouped than how old they are. Copeland argued, "Multiage classrooms are not simply a way to group students but a philosophy that supports each learner's continuous process" (p. 1).

Student assessment at the Jemicy School is nontraditional in that the students do not receive grades for knowledge acquired. Progress is assessed using a bench marking system developed by the school. The focus of the school is on authentic learning for the joy of it versus learning to receive grades. Tomlinson (2001) stressed, "Grading, as we typically practice it, is more about charting circumstances of student birth and experience than it is about documenting growth" (p. 14). She continued by saying that teachers' beliefs about teaching have to extend to grading because grading is a communication tool that ought to serve learning. If the teacher is instructing in a responsive style, the grading style should be compliant to that style. Grading should be done for success in the same way the teacher teaches. Students' degrees of success should reflect the degrees of their own growth (Tomlinson).

The Jemicy School employs a technique called "responding to the response" to promote student participation. The approach of having students take risks to actively participate in the educational process is evidenced throughout the school. Reciprocal questioning is practiced throughout the school. In her book *Smart Kids with School Problems* Vail (1989) stated, "A project-gone-wrong can be the seedbed of discovery" (p. 13). She explained that students who can guide their excitement and attention show psychological availability for school work. Active

learning is dependent on one's willingness to take risks. Accepting the error half of trial and error leads to openness to ideas. Vail continued by saying teachers need to encourage output without insisting on perfection that endangers the students' willingness to take risks.

According to Brooks and Brooks (1993) for education to be effective, the learning environment must be conducive to learning. They stated that schools must create environments in which teachers and students are encouraged to think and explore.

Experiential education is an enormous component in the curriculum used at the Jemicy School. Students are encouraged to explore, discover, and experience the concepts and information they desire to learn. Experiential education is learning by doing or undergoing experiences. It involves actively engaging students in the experience. According to Kraft and Sakofs (1988), John Dewey was the most famous advocate of the philosophy of experiential education. In experiential education, the active process between the student and the teacher is the focus. Experiential education requires new roles of not just the students but the teachers and the administrators as well. The teacher's role is to be engaged beside the students in direct experiences with the learning environment and the content being taught in order to increase knowledge, develop skills, and clarify values. Experiential education provides a process for helping everyone involved become a more engaged learner (Kraft & Sakofs).

Multisensory education, like experiential education, is woven throughout the curriculum at the Jemicy School. Opportunities for learning through all of the senses are evident throughout the campus grounds. The International Dyslexia Association (2000) defined multisensory teaching as simultaneously visual, auditory, and kinesthetic–tactile to enhance memory and learning. Students with dyslexia often display weakness in auditory or visual processing. Multisensory education allows these students the advantage of using all three paths. Current

research supported by the National Institute of Child Health and Human Development has shown that dyslexic students in multisensory programs made significant gains (International Dyslexia Association, 2000). Jemicy School's curriculum employs programs such as *Project Read* that incorporate multisensory strategies. The school staff incorporates multisensory techniques in every classroom.

Many of the strategies and techniques used at the Jemicy School are deeply rooted in the school's philosophy conceived by its founders. These include things such as the environment, Fort Play, and the use of experiential learning techniques. The founders of the Jemicy School had a vision to create a unique school that would work to educate dyslexic students to their full capacity. Kouzes and Posner (2002) stressed the importance having a vision has on motivation and performance. They commented that no one could enforce a self-motivating vision on anyone else. It is one's passion for something, what one finds worth in, that instills the vision. Kouzes and Posner also stated that visionary leaders must be concerned not only for short-term performance but for the long-term creation of value. The Jemicy School has maintained the vision of the founders for the past 36 years. The administrators and staff of the school share the original vision for the school. They inspire others to want to carry on key elements that support the vision by providing the conditions and opportunities that foster these ideals.

The Jemicy School faculty members are highly trained in the teaching methods certified by the International Dyslexia Association including experiential and multisensory education. Jemicy also has an ongoing commitment to professional development that keeps the faculty up to date on current learning techniques. Birsh (2004) reported that teacher knowledge was essential to student success. She continued by stating that teachers must comprehend the theoretical underpinnings of how knowledge is acquired. They must know effective methods for teaching

skills as well as how to meet the needs of all of their students. Poulou (2007) found that both psychology and educational research has shown that teachers' self-confidence in their ability to perform the actions that lead to student learning is one of the few individual characteristics that predicts teacher performance and student outcomes. Poulou cited Bandura who stated, "Unless people believe they can produce desired effects by their actions, they have little incentive to act; efficacy belief, therefore, is a major basis of action (p. 3). Poulon's research showed that self-perceptions of teaching competence, personal characteristics, and motivation for teaching were contributory factors to teachers' effectiveness.

The administrators of the Jemicy School empower the teaching staff to do their jobs. They stated that they hired creative and innovative individuals who believed in the mission of the school, then allowed them do what they do best. They are actively engaged in the process of the school. Because they are personally devoted to the outcomes of the school, teachers are more aware of and inspired to increase the mission of the school, as confirmed by Owens (2004).

The Jemicy School has a wide-ranging arts program including visual arts, dance, music, and drama. The art instructors incorporate academic lessons into the art classes. Art is also incorporated into every discipline taught at the school. Because multisensory learning is primarily project based, art is a natural inclusion into the curriculum. In her article *Succeeding through the Arts* Smith (1997) stated that the arts engage the learner's soul, mind, and body. She added that the arts help learning become part of a person's very being. She commented that all of the art forms offer entry into academic learning and an opportunity to reinforce skills. Smith (1997) remarked that art also creates a forum for creative problem solving given that all of the art forms require problem solving once the basic skills have been mastered. "In the arts, students

are expected to find their own individual answers to questions, try them out, then criticize their own work constructively and self-correct if necessary" (Smith, 1997, p. 37).

The administrators and teachers of the Jemicy School perceive the school as a fun place to work. They said they love their jobs and are enthusiastic in what they do. They reported being extremely passionate about the education of dyslexic children. They stated they recognized that the learning process and outcomes at Jemicy School provided great education. Wooden, former head coach of UCLA, (Wooden & Jamison, 2005) remarked that work without joy is drudgery and drudgery doesn't produce success. In developing his pyramid of success, Wooden chose enthusiasm as the second cornerstone of success. He commented that enthusiasm transforms work into industriousness and catapults you to most productive heights. He stated, "As a leader you must be filled with energy, eagerness, joy, and love for what you do" (Wooden & Jamison, p. 22). Wooden also stated that the enthusiasm of leaders does the same for those they lead.

Parents of the Jemicy students involved in the study said they would recommend the school to other parents and they gave the school the highest achievable praise. They credited the school with improving their children's self-esteem, instilling in them a passion for learning, furnishing them with academic success for life, and fostering their creativity. In his book *The Motivation Breakthrough* Lavoie (2007) stated that when schools and parents work together, students' motivation and performance is enhanced. He went on to say that parents need to develop a "consumer" attitude toward school. He stated that this helps nourish a productive and effective relationship with the school personnel. Lavoie commented that most current school effectiveness studies have cited parental involvement as being a critical component of student

progress (Lavoie). This is evidenced in the collaborative efforts between parents and the Jemicy School staff.

The perception of the school's learning environment by everyone involved in this study was that the Jemicy School provides a unique, integrated, collaborative, educational opportunity for dyslexic students. It was perceived by everyone involved in this case study, including the principal researcher, to be an exemplary example of best practices for the education of dyslexic children.

The Jemicy School is a unique learning institution. "Uniqueness fosters pride and boasts the self-respect and self-esteem of everyone associated with the organization. The more proud people are of the school the more loyal they are likely to be" (Kouzes & Posner, 2002, p. 127). This is further evidence of the importance of the highlighted best practices established at Jemicy to be used as an example for other educational institutions to emulate.

Conclusion

The Jemicy School in Owings Mills, Maryland is an exemplary school with a great deal to offer to students with dyslexia. This case study revealed that the methods and practices used at the school are conducive to developing the creative potential of dyslexic children. The study confirmed that using multisensory and experiential education does foster students' creativity.

The school's unique environment along with the effective teaching methods used by the school could and should be incorporated into other school systems. The exemplary education provided by the school makes the school a viable benchmark for other schools to follow. The Jemicy School should be a model for educators to follow for helping dyslexic children learn in order to reach their fullest potential.

Recommendations for Practice

I recommend the following for practice from the findings of this case study:

1. The methods and practices used by the Jemicy School that are conducive to developing the creative potential of the dyslexic child should be incorporated into all schools that teach dyslexic students.
2. Public and private educational institutions should consider modifying their learning environment to incorporate many of the elements that enhance the Jemicy School.
3. The Jemicy School should be developed into a benchmark school for other private educational institutions that teach dyslexic students to model.
4. The teaching techniques and the quality of relationships at the Jemicy School would likely be successful with a wide variety of students (and teachers) with many different learning styles. All schools could look at and assess the value of incorporating these techniques for use in the general education environment.

Recommendations for Further Research

I recommend that further research be conducted as follows:

1. A follow-up study should be conducted that examines the learning outcomes of students who have attended the Jemicy School or others with similar criteria.
2. Further research should be conducted to examine the perceptions of the dyslexic students who attend the Jemicy School and similar schools.
3. A comparative study examining the learning outcomes of dyslexic students taught in traditional school settings versus the outcomes of students taught at the Jemicy School and similar schools should be undertaken.

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APPENDICES

APPENDIX A

Letter of Request to Head of School

Megan McGowan
Jemicy
Lower School
11 Celadon Rod
Owings Mills, Md. 21117

Dear Ms. McGowan:

I am a doctoral student at East Tennessee State University. I am interested in conducting a case study within your school to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. I would like to collect data by observing teachers and students in action, conduct personal interviews of a selective group of administrators, teachers, parents and students as well as an analysis of the school's records.

All names and persons involved in the study will be changed to insure the confidentiality of participants. Any participant may withdraw consent and discontinue participation in the study at any time.

I am requesting your permission to conduct this study within Jemicy School and will provide your office with a copy of the finished report. The purpose of the study will be to use the findings to identify the most effective techniques that could be incorporated into other schools – public and private thus developing a model to provide educators with a road map for helping dyslexic children to learn.

Please feel free to contact my doctoral advisor Dr. Jasmine Renner at (423) 439-7629 or me if you have any further questions about my study. My telephone number is (423) 869-3527.

Sincerely,
Brenda Graves
Doctoral Student
East Tennessee State University

APPENDIX B

Recruiting Letter to Administrators

Administrator
Jemicy
Lower School
11 Celadon Rod
Owings Mills, Md. 21117

Dear Administrator:

I am a doctoral student at East Tennessee State University. I am conducting a case study within your school to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. The purpose of the study will be to use the findings to identify the most effective techniques that could be incorporated into other schools – public and private thus developing a model to provide educators with a road map for helping dyslexic children to learn.

I would like to interview you for the purpose of gathering data about how the innovative and non-traditional teaching methods, used by the school, are developed. I am also interested in your perceptions about the school's learning environment.

If you are willing to participate as an interviewee in my study please contact me at gravesdbc@centurytel.net or by phone at (423) 489-9840. An Informed Consent Form will then be sent to you for you to review and sign if you agree to participate in the study. I will enclose a self addressed stamped envelope for you to return the Informed Consent Form to me.

Please feel free to contact me if you have any further questions or concerns. Thank you for your time and consideration in participation in this study.

Sincerely,
Brenda Graves
Doctoral Student
East Tennessee State University

APPENDIX C

Recruiting Letter to Teachers

Teacher
Jemicy
Lower School
11 Celadon Rod
Owings Mills, Md. 21117

Dear Teacher:

I am a doctoral student at East Tennessee State University. I am conducting a case study within your school to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. The purpose of the study will be to use the findings to identify the most effective techniques that could be incorporated into other schools – public and private thus developing a model to provide educators with a road map for helping dyslexic children to learn.

I would like to interview you for the purpose of gathering data about how the innovative and non-traditional teaching methods, used by the school, are developed. I am also interested in your perceptions of the school's learning environment.

If you are willing to participate as an interviewee in my study please contact me at gravesdbc@centurytel.net or by phone at (423) 489-9840. An Informed Consent Form will then be sent to you for you to review and sign if you agree to participate in the study. I will enclose a self addressed stamped envelope for you to return the Informed Consent Form to me.

Please feel free to contact me if you have any further questions or concerns. Thank you for your time and consideration in participation in this study.

Sincerely,
Brenda Graves
Doctoral Student
East Tennessee State University

APPENDIX D

Recruiting Letter to Parents

Parent
Jemicy
Lower School
11 Celadon Rod
Owings Mills, Md. 21117

Dear Parent:

I am a doctoral student at East Tennessee State University. I am conducting a case study at Jemicy School to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child. The purpose of the study will be to use the findings to identify the most effective techniques that could be incorporated into other schools – public and private thus developing a model to provide educators with a road map for helping dyslexic children to learn.

I would like to interview parents of either current or previously enrolled students of the school for the purpose of gathering data about their perceptions of the school's learning environment. Your name was given to me by the director of Jemicy School Alumni Association as a possible candidate to be interviewed.

If you would be willing to participate as an interviewee in my study please contact me at gravesdbc@centurytel.net or by phone at (423) 489-9840. An Informed Consent Form will then be sent to you for you to review and sign if you agree to participate in the study. I will enclose a self addressed stamped envelope for you to return the Informed Consent Form to me.

Please feel free to contact me if you have any questions or concerns about the study. Thank you for your time and consideration in participation in this study.

Sincerely,
Brenda Graves
Doctoral Student
East Tennessee State University

APPENDIX E

Informed Consent Form

East Tennessee State University
Department of Educational Leadership and Policy Analysis

Informed Consent Form administrator and teacher

PRINCIPAL INVESTIGATOR: Brenda Graves, Ed.S.

TITLE OF PROJECT: *A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children.*

Please carefully read the following Informed Consent information and sign the Informed Consent if you freely choose to participate in this research. You will receive a copy of this Informed Consent form for your record.

PURPOSE: The purpose of this research is to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child.

DURATION: The interviews will take place on site and will last approximately 60 minutes. The interviews will be conducted September through November of 2008. Participation in this research is strictly voluntary. You may refuse to answer any questions you find uncomfortable or withdraw at any time.

PROCEDURES: The procedures used will consist of face-to-face interviews. The interview will be audio recorded and transcribed for response accuracy. All information you provide will be kept strictly confidential. I will ask questions concerning the specific teaching strategies and methods utilized by the school to foster creativity among dyslexic children as well as how the innovative and non-traditional teaching methods, used by school, are developed. Questions about your perceptions about the school's learning environment will also be asked. Data collected from the interviews will be used to develop the components of a dissertation.

Subject's Initials (_____)

PRINCIPAL INVESTIGATOR: Brenda Graves Ed.S.

TITLE OF PROJECT: *A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children.*

POSSIBLE RISK/DISCOMFORTS: There is a slight risk that some of the questions could cause mild discomfort. If you choose, you do not have to respond to those questions.

POSSIBLE BENEFITS and/or COMPENSATION: You will receive a copy of the final research report to review. The benefit of your participation in this study is to provide educators with a road map for helping dyslexic children to learn.

CONTACT FOR QUESTIONS: If you have any questions or problems at any time, you may call Brenda Graves at 423-869-3527 gravesdbc@centurytel.net or Dr. Jasmine R. Renner, LL.M., Ed.D. Assistant Professor of Higher Education Administration Department of Education Leadership and Policy Analysis East Tennessee State University Box 70550 Johnson City, TN 37614 Office: 423-439-7629 Fax: 423-439-7636 rennerj@mail.etsu.edu. You may call the Chairman of the Institutional Review Board at 423/439-6054 for any questions you may have about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can't reach the study staff, you may call an IRB Coordinator at 423-439-6055 or 423-439-6002.

CONFIDENTIALITY: Each participant's right to privacy will be maintained. The results of the research may be published and/or presented at meetings without naming you as a participant. The research information will only be available for inspection by personnel from the East Tennessee State University Department of Educational Leadership and Policy Analysis in collaboration with the researcher, East Tennessee State University Campus Institutional Review Board and one other individual familiar with the subject and research procedures as a peer reviewer. Tape recordings and field notes will be stored for a period of 5 years following the research at the home of the researcher. All information about the participants will be treated confidentially and will not be revealed, except as noted above, unless required by law.

PERMISION to QUOTE**:** Your words may be used in the final research report to clarify or further explain a component of the theoretical framework. I will not identify the source of the quote. In addition, I will take precautions to ensure that there are no identifiers in the body of the quote.

Subject's Initials (_____)

PRINCIPAL INVESTIGATOR: Brenda Graves Ed.S.

TITLE OF PROJECT: *A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children.*

VOLUNTARY PARTICIPATION/ RIGHT OF REFUSAL: The researcher requests your voluntary participation in this research. Your participation is strictly voluntary and you have the right to withdraw from the research at any time without penalty. In addition, you have the right to withdraw your words from this research at any time without penalty. You may refuse to participate in this research without penalty. The purpose, risk, and benefits of the research project have been explained to me as well as are known and available. I understand what my participation involves. Furthermore, I understand that I am free to ask questions and withdraw from the research project at any time, without penalty. I sign it freely and voluntarily. A signed copy has been given to me. My study records will be maintained in strictest confidence according to current legal requirements and will not be revealed unless required by law or as noted above.

ALTERNATIVE PROCEDURES: There are no alternative procedures except to choose not to participate in this research.

This research project will begin in September of 2008 and conclude in November of 2008

I understand the procedures to be used in this research and the possible risk involved. I also understand that participation in this research is strictly voluntary and that I may withdraw at any time by signing on the line below, I consent to participate in this research.

_____ _____

Signature of participant Date

_____ _____

Signature of principal researcher Date

Subject's Initials (_____)

APPENDIX F

Informed Consent Form

East Tennessee State University
Department of Educational Leadership and Policy Analysis

Informed Consent Form Parent

PRINCIPAL INVESTIGATOR: Brenda Graves Ed.S.

TITLE OF PROJECT: *A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children.*

Please carefully read the following Informed Consent information and sign the Informed Consent if you freely choose to participate in this research. You will receive a copy of this Informed Consent form for your record.

PURPOSE: The purpose of this research is to examine a school specialized in teaching children with dyslexia for the purpose of determining what methods and practices are being used that are conducive to developing the creative potential of the dyslexic child.

DURATION: The interviews will take place on site and will last approximately 60 minutes. The interviews will be conducted September through November of 2008. Participation in this research is strictly voluntary. You may refuse to answer any questions you find uncomfortable or withdraw at any time.

PROCEDURES: The procedures used will consist of face-to-face interviews. The interview will be audio recorded and transcribed for response accuracy. All information you provide will be kept strictly confidential. The researcher will ask questions about your perceptions of the school's learning environment. Data collected from the interviews will be used to develop the components of a dissertation.

Subject's Initials (_____)

PRINCIPAL INVESTIGATOR: Brenda Graves Ed.S.

TITLE OF PROJECT: *A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children.*

POSSIBLE RISK/DISCOMFORTS: There is a slight risk that some of the questions could cause mild discomfort. If you choose, you do not have to respond to those questions.

POSSIBLE BENEFITS and/or COMPENSATION: You will receive a copy of the final research report to review. The benefit of your participation in this research is to provide educators with a road map for helping dyslexic children to learn.

CONTACT FOR QUESTIONS: If you have any questions or problems at any time, you may call Brenda Graves at 423-869-3527 gravesdbc@centurytel.net or Dr. Jasmine R. Renner, LL.M., Ed.D. Assistant Professor of Higher Education Administration Department of Education Leadership and Policy Analysis East Tennessee State University Box 70550 Johnson City, TN 37614 Office: 423-439-7629 Fax: 423-439-7636 rennerj@mail.etsu.edu. You may call the Chairman of the Institutional Review Board at 423/439-6054 for any questions you may have about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can't reach the study staff, you may call an IRB Coordinator at 423-439-6055 or 423-439-6002.

CONFIDENTIALITY: Each participant's right to privacy will be maintained. The results of the research may be published and/or presented at meetings without naming you as a participant. The research information will only be available for inspection by personnel from the East Tennessee State University Department of Educational Leadership and Policy Analysis in collaboration with the researcher, East Tennessee State University Campus Institutional Review Board and one other individual familiar with the subject and research procedures as a peer reviewer. Tape recordings and field notes will be stored for a period of 5 years following the study at the home of the researcher. All information about the participants will be treated confidentially and will not be revealed, except as noted above, unless required by law.

PERMISION to QUOTE**:** Your words may be used in the final research report to clarify or further explain a component of the theoretical framework. The researcher will not identify the source of the quote. In addition, the researcher will take precautions to ensure that there are no identifiers in the body of the quote.

Subject's Initials (_____)

PRINCIPAL INVESTIGATOR: Brenda Graves Ed.S.

TITLE OF PROJECT: *A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children.*

VOLUNTARY PARTICIPATION/ RIGHT OF REFUSAL: The researcher requests your voluntary participation in this research. Your participation is strictly voluntary and you have the right to withdraw from the research at any time without penalty. In addition, you have the right to withdraw your words from this research at any time without penalty. You may refuse to participate in this research without penalty. The purpose, risk, and benefits of the research project have been explained to me as well as are known and available. I understand what my participation involves. Furthermore, I understand that I am free to ask questions and withdraw from the research project at any time, without penalty. I sign it freely and voluntarily. A signed copy has been given to me. My study records will be maintained in strictest confidence according to current legal requirements and will not be revealed unless required by law or as noted above.

ALTERNATIVE PROCEDURES: There are no alternative procedures available except to choose not to participate in this study.

This research project will begin in September of 2008 and conclude in November of 2008

I understand the procedures to be used in this research and the possible risk involved. I also understand that participation in this research is strictly voluntary and that I may withdraw at any time by signing on the line below, I consent to participate in this research.

_____ _____

Signature of participant Date

_____ _____

Signature of principal researcher Date

Subject's Initials (_____)

APPENDIX G

Interview Guide for Administrator

Introduction:

1. **Welcome**: I would like to thank you for your willingness to talk to me about the Jemicy School
2. **Explain the Purpose of the Study**: I will use your words to help identify the most effective techniques and practices conducive to developing creative potential of dyslexic children, which could be incorporated into other school systems. I plan to share this in a manuscript submitted for completion of a doctoral degree at East Tennessee State University. I will also be presenting the manuscript to school systems in East Tennessee. Therefore, your participation in this study is critically important. Your words, and the resulting findings, will be helpful in developing a model to provide educators with a road map for helping dyslexic children to learn more effectively.
3. **Describe the Informed Consent Form and its Purpose**: I assure you that your participation in this study will remain anonymous. I may quote you in my final research report. However, I will not use your name in association with these quotes, nor will I use any identifiers that might link you to your words. This session should take approximately one-hour. I am tape-recording this session to have an accurate record of your comments. Please read and sign the informed consent form. Give a copy of the signed informed consent form to the interviewee. Do you have any questions before I begin the tape recording? Turn-on tape recorder – Do I have your permission to tape record this session?

Main Interview Questions:

1. Please describe who you are and the kinds of contacts that you have with the Jemicy School
2. What are your primary responsibilities at the school?
3. Did you work in the field of education either public or private prior to coming to the Jemicy School? If so what influenced your choice to work at the Jemicy School?
4. What specific techniques are used to foster creativity among the students?
5. Would you briefly describe the methods used at the school?
6. Who decides what themes are going to be studied? Do the students have a say in the decision?
7. What are your general perceptions about the school's learning environment?
8. Are there any other things that stand out about the school that you would like to mention?

Conclusion:

Based on the information that you have given me, I would summarize your comments in this way: Is my summary correct? Please remember that I plan to write my research findings in a dissertation. Based on your feelings about the school what would you want to emphasize in the paper? Do you have any additional comments before I stop the tape-recorder?
This concludes our session. Turn-off the tape recorder - Do you have any additional comments off the record? Again, I would like to thank you for your participation in this study

APPENDIX H

Interview Guide for Teacher

Introduction:

1. **Welcome**: I would like to thank you for your willingness to talk to me about the Jemicy School .
2. **Explain the Purpose of the Study**: I will use your words to help identify the most effective techniques and practices conducive to developing creative potential of dyslexic children, which could be incorporated into other school systems. I plan to share this in a manuscript submitted for completion of a doctoral degree at East Tennessee State University. I will also be presenting the manuscript to school systems in East Tennessee. Therefore, your participation in this study is critically important. Your words, and the resulting findings, will be helpful in developing a model to provide educators with a road map for helping dyslexic children to learn more effectively.
3. **Describe the Informed Consent Form and its Purpose**: I assure you that your participation in this study will remain anonymous. I may quote you in my final research report. However, I will not use your name in association with these quotes, nor will I use any identifiers that might link you to your words. This session should take approximately one-hour. I am tape-recording this session to have an accurate record of your comments. Please read and sign the informed consent form. Give a copy of the signed informed consent form to the interviewee. Do you have any questions before I begin the tape recording? Turn-on tape recorder – Do I have your permission to tape record this session?

Main Interview Questions:

1. Please describe who you are and the kinds of contacts that you have with the Jemicy School .
2. What are your primary responsibilities at the school?
3. Did you work in the field of education either public or private prior to coming to the Jemicy School? If so what influenced your choice to work at the Jemicy School?
4. Do you have an instructional guide to follow for each theme? If so how is it developed? If not do you developed it yourself throughout the theme study?
5. Who decides what themes are going to be studied? Do the students have a say in the decision?
6. How specific are your instructions to the students during a project?
7. What specific techniques do you use to foster creativity among the students?
8. What techniques do you use to encourage the students to question and explore in the learning process?
9. Do you have a guide of probing questions that you use each theme?
10. Do the students have a choice in which art mediums they work in?
11. How are the activities of a project assessed? Are traditional grades given to the students?
12. What are your general perceptions about the school's learning environment?
13. Are there any other things that stand out about the school that you would like to mention?

Conclusion:

Based on the information that you have given me, I would summarize your comments in this way: Is my summary correct? Please remember that I plan to write my research findings in a dissertation. Based on your feelings about the school what would you want to emphasize in the paper? Do you have any additional comments before I stop the tape-recorder?
This concludes our session. Turn-off the tape recorder - Do you have any additional comments off the record? Again, I would like to thank you for your participation in this study

APPENDIX I

Interview Guide for Parent

Introduction:

1. **Welcome**: I would like to thank you for your willingness to talk to me about the Jemicy School.
2. **Explain the Purpose of the Study**: I will use your words to help identify the most effective techniques and practices conducive to developing creative potential of dyslexic children, which could be incorporated into other school systems. I plan to share this in a manuscript submitted for completion of a doctoral degree at East Tennessee State University. I will also be presenting the manuscript to school systems in East Tennessee. Therefore, your participation in this study is critically important. Your words, and the resulting findings, will be helpful in developing a model to provide educators with a road map for helping dyslexic children to learn more effectively.
3. **Describe the Informed Consent Form and its Purpose**: I assure you that your participation in this study will remain anonymous. I may quote you in my final research report. However, I will not use your name in association with these quotes, nor will I use any identifiers that might link you to your words. This session should take approximately one-hour. I am tape-recording this session to have an accurate record of your comments. Please read and sign the informed consent form. Give a copy of the signed informed consent form to the interviewee. Do you have any questions before I begin the tape recording? Turn-on tape recorder – Do I have your permission to tape record this session?

Main Interview Questions:

1. Please describe who you are and the kinds of contacts that you have with the Jemicy School.
2. Did your child attend public school or another private school prior to coming to the Jemicy School?
3. Why did you choose to send your child to the school?
4. Did you feel that your child was creative prior to attending the school?
5. Has the school helped to increase your child's creativity? If so how?
6. What do you think has been the most beneficial aspect of your child's education at the school?
7. Would you recommend the school to other parents? Why or why not?
8. Do you feel that the school encourages parental involvement?
9. How involved would you say you are or have been in your child's education?
10. What are your general perceptions about the school's learning environment?
11. Are there any other things that stand out about the school that you would like to mention?

Conclusion:

Based on the information that you have given me, I would summarize your comments in this way: Is my summary correct? Please remember that I plan to write my research findings in a dissertation. Based on your feelings about the school what would you want to emphasize in the paper? Do you have any additional comments before I stop the tape-recorder?
This concludes our session. Turn-off the tape recorder - Do you have any additional comments off the record? Again, I would like to thank you for your participation in this study

APPENDIX J

Document Review Guide

Document Title: _____

Date of Document: _____

Date Retrieved: _____

Location of Document: _____

Document Review Questions:

1. According to this document what specific teaching strategies and methods are utilized at the school to foster creativity among dyslexic children? (Teacher Lesson Plans, School's policy handbook, institutional mission statement and belief)

2. According to this document how are the innovative and non-traditional teaching methods, used by school, developed? (Description of program development and evaluation)

3. According to this document specifically how does the school incorporate the arts into academic skills used to teach dyslexic students? (Student progress report forms/sample portfolios)

APPENDIX K

Letter of Request to Observe Children

Classroom Parent
Jemicy
Lower School
11 Celadon Rod
Owings Mills, Md. 21117

Dear Parent:

My name is Brenda Graves, and I am a graduate student at East Tennessee State University. I am working on my doctorate degree in Educational Leadership. In order to complete my studies, I need to complete a dissertation. The name of my dissertation is "A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children."

The purpose of the research will be to use the findings to identify the most effective techniques that could be incorporated into other schools – public and private thus developing a model to provide educators with a road map for helping dyslexic children to learn.

I will be observing in your child's classroom from September through November 2008. I anticipate being in each classroom between 1 to 3 days. The purpose of the observations will be to gather data regarding which specific teaching strategies and methods are being utilized at the school to foster creativity among dyslexic children. I will also be looking at specifically how the school incorporates the arts into academic skills used to teach dyslexic students. I will gather data through field notes written on a lab top computer. This method is completely anonymous and confidential. There will be no way to connect your child's name with what is observed in the classroom. No names will be used in the data as all children will be referred to as student. I will not be engaging the children in conversation. Therefore, there is no anticipated risk to your child. Although your child's rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the ETSU IRB and personnel particular to this research will have access to the research records.

If you have any research-related questions or problems, you may contact me at gravesdbc@centurytel.net or 423-489-9840. I am working on this research project under the supervision of Dr. Jasmine R. Renner, LL.M., Ed.D. Assistant Professor of Higher Education Administration Department of Education Leadership and Policy Analysis East Tennessee State University. You may reach her at Box 70550 Johnson City, TN 37614 Office: 423-439-7629 Fax: 423-439-7636 rennerj@mail.etsu.edu. You may call the Chairman of the Institutional Review Board at 423-439-6054 for any questions you may have about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can't reach the study staff, you may call an IRB Coordinator at 423-439-6055 or 423-439-6002.

I am requesting permission to observe your child. Participation is voluntary and you may refuse to grant permission for your child to be observed. There are no alternative procedures except to choose not to participate in the research. If you do not wish for your child to be observed your child will be removed from the classroom during the time I am observing. If you give permission for your child to be observed please sign the classroom observation permission form on the bottom of this letter and return it to the teacher as soon as possible.

Thank you for your time and consideration in participating in this study.

Sincerely,
Brenda Graves
Doctoral Student
East Tennessee State University

Classroom Observation Permission Form

Student _____

I _____ am giving written permission for my child
(Parent or Guardian's Name)

to participate in classroom observations as stated in this letter.

Parent or Guardian's Signature _____

Date_____

APPENDIX L

Child Assent for Children under Age 12

(To be read aloud to the child)

My name is Brenda Graves. I am a third grade teacher but I am also a student. Right now, I am trying to learn more about how your school uses the arts to help you learn things better and think creatively. I will be watching your classroom today and taking notes about some of the things that you and your teacher are doing. If you agree to let me watch you and your teacher work you may be helping me to encourage other schools to use some of the same ideas that you use here. You should know that if you decide to help me or if you decide to say "no," your choice will not affect your grade in this class. I have already ask your parents to give their permission for you to be in this study, but even if your parents say "yes," you can still say "no" and decide not to be in the study. If you don't want to be in my study, you don't have to be in it. Remember, being in the study is up to you and no one will be upset if you don't want to be in the study or if you decide to stop after we begin, that's okay, too. You can ask me any questions that you have about the study. Would you like to let me watch you and you teacher work in the classroom today?

[Child answers yes or no; only a definite yes may be taken as consent to participate.]

APPENDIX M

Observation Guide

Who was observed? : _____

When: _____

Where: _____

Why: To observe and document interactions between students and teachers in the classroom for the purpose of identifying specific teaching strategies and methods used to foster creativity among dyslexic children as well as how the school incorporates the arts into academic skills.

Observation Questions:

1. What academic activities were the students engaged in?

2. What material did the teacher covered in the class?

3. What academic subjects were included?

4. Specifically how did the teacher incorporate the arts into academic skills?

5. Which art mediums were used?

APPENDIX N

Double-Entry Field Notes

Direct Observations	**Interpretation of Observations**

APPENDIX O

Check List Observation Tool

Who was observed? : _____

When: _____

Where: _____

Academic Discipline	Activity Notes
Language Arts	_____
Drama	_____
Music	_____
Art	_____
Dance	_____
Math	_____
Drama	_____
Music	_____
Art	_____
Dance	_____
Science	_____
Drama	_____
Music	_____
Art	_____
Dance	_____
Social Studies	_____
Drama	_____
Music	_____
Art	_____
Dance	_____

APPENDIX P

Peer Assist Letter

January 5, 2009

To Whom It May Concern:

I served as peer assistant for Brenda Graves during her work on her dissertation, A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children. This study took place in Owings Mills Maryland. Brenda requested that I assist her in the data analysis process of her study.

She shared the process of her data collection with me, and we discussed her methods of analysis. I reviewed the data that she collected and I assisted her in coding the data and developing the categories. We talked about the importance of validity and reliability issues pertaining to her study.

I was glad to have helped Brenda through this study and participate in the research process. I hope my assistance and support have been beneficial to the overall outcome.

Sincerely,

Nila S. McNew
Literacy Leader
Claiborne County, Tn.

APPENDIX Q

Peer Debriefer Letter

January 5, 2009

To Whom It May Concern:

I served as peer reviewer for Brenda Graves during her work on her dissertation, A Case study of Jemicy School to determine practices conducive to developing creative potential of dyslexic children. This study took place in Owings Mills Maryland. Throughout her study, we discussed the work she was doing, from the prospectus through the research and analysis. Brenda discussed her study with me and I provided her with feedback and reactions to the study.

She shared the process of her data collection with me, and we discussed her methods of analysis. We talked about the importance of validity and reliability issues pertaining to her study. I looked over her references and research questions, providing feedback and some recommendations. I believe that the data gathered in this study has much potential to be extremely useful to the education of dyslexic students.

I was glad to have helped Brenda through this study and participate in the research process. I hope my assistance and support have been beneficial to the overall outcome.

Sincerely,

Debra Jessie Ed.S.
English Instructor
Claiborne County, Tn.

APPENDIX R

Auditor's Letter

Dr. Clayton Hess
Director if Institutional Research and Assessment
Lincoln Memorial University,
Harrogate, TN 37752

December 1, 2008
Dear Ms. Graves,

On September 10, 2008, I had the opportunity to meet with you and begin the process of auditing your qualitative dissertation. The time you took familiarizing me with your Case study of Jemicy School was very interesting and helpful. I have enjoyed reading your study and confirming the accuracy of the data you have collected.

My review consisted of these items:
A review of the design section
The interview list was verified and checked to make sure that a recorded copy was present for each interview.
The interview itself was reviewed to determine what type of information was collected.
Interview transcripts were checked with the paper to verify accuracy.
Review and verification of observation field notes.
Review and verification of all informed consent documents were also accomplished.

Conclusions: The research design accurately described the research questions to be addressed. The interview protocol was followed, and the documents were analyzed and found to have clear direction and focus. The interview, observation and document review guides were well designed and asked appropriate questions and the files were accurate and clear.
Auditor Comments:
I conclude that this study was conducted in a professional and thorough manner. All researched data were present. There was evidence of credible qualitative research techniques. I commend you on the work you have done for this study. It is my judgment, based on my observation of the audit trail, that you have maintained a degree of professionalism as a researcher and have conducted a valuable and worthwhile research study.

Dr. Clayton Hess
Director if Institutional Research and Assessment
Lincoln Memorial University, Harrogate, TN

APPENDIX S

Personal Narrative

This personal narrative was used for the purpose of bracketing my lived experiences with dyslexia. The personal discussions in this journal allowed me to focus objectively on the study, thus not allowing my personal feelings to overshadow the case study experience. The journal also helped identify any possible biases or preconceptions that I have as well as allowed me to explicate why I chose to conduct the study. The narrative consists of two sections. The first section contains my personal experience. The second section discusses my experiences during the completion of the study.

First, let me say that I was an adult before I realized that I was dyslexic. I will provide a little background information about how that discovery came about. I began my teaching career in 1979. From the beginning my teaching style was considered nontraditional. I taught the way I learned best, very hands on and project based. I also brought art into the everyday academics of the classroom. Unfortunately, even though my students did very well academically, the school system was not conducive to my style and after 4 years in the field I left education. I decided to pursue a career as a tour guide--a profession that I knew would suit my personality. I moved to Washington DC to work for a company that specialized in student travel, so I really never left education.

In 1989 I returned to Tennessee and back to education in 1994. I began teaching second grade in one of the county's elementary schools. It was during my 2nd year back I was informed that I had a student who was dyslexic. My response was, "Ok what does that mean and what do I need to do to help him or her?" Unfortunately, the school administrator had no answer for those questions. At that point I began to research dyslexia and how to help dyslexic students. The

more I read about dyslexia the more I saw myself and my own difficulties in the research. Besides reading about dyslexia I also began attending seminars and workshops about the best methods for working with dyslexic children. I will never forget attending the Lindamood Bell workshop "Seeing Stars," a workshop for helping students with spelling difficulties. I had to keep leaving the workshop because I knew that I would not be able to do the activities they were using. I felt like I was at an AA meeting and needed to stand up and say, "Hi, I'm Brenda and I am dyslexic!" This was actually a wonderful day for me. I realized that being dyslexic does not mean bad it just means different and different can be good. Although I was trying to find a way to help my student, little did I know that I would be helping myself.

The sad part of the story is that I went through 12 years of public education knowing that I had academic difficulties. I spent a lot of time convincing myself that I must be stupid. I actually have no recall of school before third grade. I have decided that it must have been so painful that my mind has chosen to suppress it. All of my memories of elementary school are negative. I will never forget when my sixth-grade teacher spanked me in front of the whole class for failing a spelling test. He was convinced that I was just not trying and that I was lazy and didn't care!

Like most dyslexic people reading, writing, and spelling were incredibly difficult and frustrating for me. Reading was always a dreaded task for me in school. Decoding gives me lots of trouble. Spelling has always been extremely difficult for me.

Writing has always been extremely difficult for me. I quickly developed a writing phobia. I learned all the tricks that a typical dyslexic child does: write sloppy so that no one can tell you have spelled words wrong, substitute simple easier to spell words in the writing. My writing vocabulary was minimal in comparison to my oral vocabulary. Therefore, it makes

logical sense that I am an extremely vocal person. I have always felt very comfortable with oral tasks whereas written tasks are very stressful for me.

Creativity has always been my strength but unfortunately in public education during the 1960s creativity was neither valuated nor allowed. In fact it was frowned upon. My creative endeavors often landed me in trouble with the teachers.

I managed to get through high school and even belonged to the National Beta Club through excessively hard work. I always felt like I had to work so much harder than everyone else. I just didn't understand why.

My mother has always been a wonderful inspiration to me. She encouraged me when things were hard or when I felt that I was dumb. She validated my creativity and encouraged me to use it. She is the reason I attended college. She always made me feel like I could do anything. Once at college I discovered art--something that I found I was very good at. I always knew that I wanted to work with children, so I majored in art education then added elementary education as a safety net.

One might think that being dyslexic would handicap a teacher. I, however, feel that my dyslexia enhances my teaching abilities. I understand and can relate to that struggling child in the classroom. I also feel that it gives me a unique insight to recognizing dyslexia in students that can lead to earlier diagnosis and intervention for the student. I am also an advocate for those students and fight hard for their cause.

The second section of this narrative discusses my experiences during the completion of the study. To say that this has been a challenge for me is putting it mildly.

First, dyslexic people frequently have difficultly narrowing things down and tend to think in very broad terms. Dr. Franklin can attest to the fact that this was indeed very difficult for me.

To quote her, “I was all over the place.” This frustrated me extremely. After many attempts and much assistance from Dr. Franklin, I finally got the study narrowed down to something workable.

Another tendency of dyslexic people is to work from whole to part versus part to whole, which is more typical of left brained people. The dissertation being such a large project often overwhelmed me.

As characteristic of dyslexic people I needed to hear what I was writing. Reading it silently did not work for me. I have to read it numerous times and need to bounce what I am reading off of someone else so that I can discuss what I am trying to say. If I had a dime for every time throughout the writing of this dissertation that I have said to my poor family, “How does this sound, or listen to this,” I would be a wealthy person.

Because writing is such a difficult task for me, it is a very time consuming chore. I feel that it takes me so much longer than the average person to write something. Sending an e-mail, which is a simple task for most people, is laborious for me.

Organization does not tend to be a strength for dyslexic people and it is something I have always had to work very hard at. Organizing my thoughts is a challenge for me because my brain tends to jump all over the place. I had to work very hard to get thoughts down on paper because they come in my head much faster than I can get them down on paper. Thank goodness for computers and cut and paste.

Throughout the process of writing this dissertation I felt that I encountered one obstacle after another. I frequently felt like I was walking into one brick wall after another. I had several anxiety attacks. I have to admit that I shed more than a few tears and frequently felt like throwing in the towel. However, my stubbornness always kicked in and I would refuse to give

up. Being dyslexic has taught me to be a hard worker and to be persistent when attempting to accomplish a difficult task.

Completion of this dissertation is a tremendous personal accomplishment for me. I have to confess that I never in my wildest dreams thought that I could accomplish this undertaking. I hope that my achievement of successfully completing this dissertation can be an inspiration to other dyslexic people.

VITA

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